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THE SIOUX INDIAN STUDENT--A STUDY OF SCHOLASTIC FAILURE AND PERSONALITY CONFLICT.

BY- BRYDE, JOHN F.

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AFTER ACHIEVING SATISFACTORILY FOR SEVERAL YEARS, SIOUX INDIAN STUDENTS TEND TO SHOW A REVERSAL OF THIS PROCESS AND BEGIN A STEADY DECLINE IN ACADEMIC ACHIEVEMENT. TO STUDY THIS PROBLEM, AN EXPERIMENTAL GROUP WAS SELECTED WHICH INCLUDED THE FOLLOWING OGLALA SIOUX YOUNGSTERS--(1) 164 EIGHTH GRADE STUDENTS FROM SEVEN ELEMENTARY SCHOOLS, AND (2) 159 NINTH GRADE STUDENTS FROM THE TWO HIGH SCHOOLS ON PINE RIDGE RESERVATION. THE CONTROL GROUP CONTAINED 76 WHITE EIGHTH GRADE STUDENTS AND 126 WHITE NINTH GRADE STUDENTS FROM PUBLIC SCHOOLS IN THE SMALL TOWNS CLOSEST TO THE RESERVATION. FOR PROFILE COMPARISONS WITH INDIAN EIGHTH AND NINTH GRADERS AND WITH INDIAN DROPOUTS, 92 SIOUX INDIAN SENIOR HIGH SCHOOL STUDENTS FROM PINE RIDGE WERE TESTED. MEANS AND STANDARD DEVIATIONS WERE COMPUTED ON ALL THE SCALES FOR COMPARISONS AMONG THE VARIOUS GROUPS, AFTER WHICH "T TESTS," ANALYSIS OF VARIANCE, AND SCHEFFE TESTS WERE UTILIZED TO DETERMINE SIGNIFICANCE AND TO LOCATE DIFFERENCES. WHEN ANALYZING ACADEMIC ACHIEVEMENT IT WAS FOUND THAT THE INDIAN GROUP FELL SHARPLY BEHIND THE WHITE GROUP AT THE EIGHTH GRADE LEVEL. THE TOTAL INDIAN GROUP REVEALED GREATER PERSONALITY DISRUPTION AND POORER ADJUSTMENT WHEN COMPARING THE PSYCHOLOGICAL VARIABLES OF REJECTION, DEPRESSION, ANXIETY, AND TENDENCIES TO WITHDRAW, PLUS SOCIAL, SELF, AND EMOTIONAL ALIENATION. (ES)

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John F. Bryde, S.J., Ph.D.

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John F. Bryde, S.J., Ph.D.

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FORWARD

This book is largely a modification of the writer's doctoral dissertation which, in turn, is the result of a two year research project sponsored by the National Institute of Mental Health, grant number 5 Fl-Mh-22, 805-02.

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John F. Bryde, S.J., Ph.D.
Holy Rosary Mission
Pine Ridge, S.D. 57770

August 4, 1966

DEDICATED TO MY FATHER

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CHAPTER I

INTRODUCTION

Among the many sources of cultural values, economic factors rank high in determining the patterns of belief and response which characterize a society. The manner in which its members make a living from natural resources is thus of prime significance in understanding social motivation. Therefore, as long as the ecology of a culture remains intact, behavior indigenous to that ecology is normal to that culture.[1]

What is of interest, though, is that when the economic basis of a culture is destroyed and its natural ecology disrupted, the values that originally arose from that economy tend to remain active and alive, but relatively inoperable in the now changed culture. This is the current history of the great Sioux nation. When their manner of making a living - hunting the buffalo - was taken away, their natural economic basis was removed, their ecology disrupted, and an alien conquering culture tried to force a new economy upon them, one to which their traditional values bore no relation.

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[1] Ecology refers to "The study of the relationship between humans in their environment or between organism and habit," (Winick, 1958, p. 182) and, "the relationship between the distribution of human groups with reference to material resources, and the consequent social and cultural patterns." (Webster, 1962, p. 458).

Unlike the quiet Pueblos whose values arose largely from a peaceful agrarian economy and who, even when surrounded by the dominant white culture, could continue exercising their values via agricultural behavior, the nomadic and warlike Sioux, with their natural ecology ruined, could and cannot exercise their traditional response patterns, even though their high valuation of physical bravery, generosity, individual autonomy, good advice and leisure are still vibrant and active (Macgregor, 1946).

Immersed in the alien, dominant White-American culture which forces, for the most part, new and conflicting patterns of belief upon them, the Sioux, trying to utilize behavior normal to their heritage, meet constant frustration. Deleterious changes in behavior, arising from such frustration, are psychologically inevitable. In this setting of face-to-face contact with White people, any behavior is regarded as deviant. For instance, the refusal of the Sioux to accept the White man's value of working from eight to five in exchange for something, led to charges of his being lazy. The great Sioux values of individual autonomy and appreciation of leisure also made the White man regard him as irresponsible.

In short, the White man's behavior is demanded of the

Sioux, even though the latter does not share the values from which the former's behavior would psychologically follow. It may, therefore, be reasonably theorized that this clashing of cultural values should have adverse effects on the personalities and educational performance of Sioux Indian students. This area of cultural confrontation thus constitutes the focus of this study.

CHAPTER II

REVIEW OF THE LITERATURE

A review of the literature pertinent to this study embraces the following areas: sources of the historical foundations of Indian behavior, sources of the historical foundations of Sioux behavior, culture change and personality stress, culture change and Indian personality stress, culture change and Sioux personality stress, the intelligence of Indians, the educational achievement of Indians, the educational achievement of Sioux students. In order, these are discussed in the following pages.

I. SOURCES OF THE HISTORICAL FOUNDATIONS OF INDIAN BEHAVIOR

Among early writers on the Indians, Grant (1933), Wissler (1938; 1946), Catlin (1959), and Hans (1964) offer excellent insights into Indian behavior prior to and immediately following initial contact with the Whites.

Modern writers who have provided good general histories of Indians are LaFarge (1956), Driver (1961), Hagen (1962), Lowie (1963), Brandon (1964), and Washburn (1964). Collier (1947), in his survey of the history of the Indians from the Incas to the present, in less than two hundred pages, is necessarily sketchy; nevertheless, he is successful in describing their general ethos and astonishing sources of survival. Underhill's (1953) comprehensive treatment of Indians is used in many colleges as a textbook. McNickle (1961) offers a general survey of the past, the current situation, and some insights into the probable future of American Indians. He points out that, across all tribes, common psychological traits can be identified which will insure Indian cultural persistence indefinitely, in spite of past and current stress. Fey and McNickle (1959) have analyzed the contributions of Indians and review the treatment they have received in their governmental relations. Simpson and Yinger (1957) also present useful articles on modern legal, demographic, economic, health, educational and political conditions of Indians today. The Bureau of American Ethnology, Smithsonian Institute, Washington, D.C. has extensive reference lists on Indian history, culture and traditions, while the Bureau of Indian Affairs of the Department of the Interior, Washington, D.C., offers publications on every facet of Indian life today.

II. SOURCES OF HISTORICAL FOUNDATIONS OF SIOUX BEHAVIOR

Hyde (1937; 1956; 1961) and Hassrick (1964) provide the best and most recent general histories of the Sioux in which one can see most vividly the origins of Sioux values. Jackson (1965) in her book which was very influential in the later 19th century devotes a chapter to the Sioux. Textor (1896) has always been a basic source on the Sioux and their relations with the government. Oehler (1959) depicts the fierce pride and spirit of the Sioux, and Robinson (1904) presents much information not found in other histories.

Riggs (1940), Finerty (1962), and Sandoz (1961) give vivid accounts of Sioux life when the Sioux were still relatively uninfluenced by the Whites. In his classic work on the North American Indian, Curtis (1908) devotes volume three to the Teton Sioux. Vestal's classic works (1932; 1934), although they have a strong Indian bias, are standard sources of Indian history and of the Sioux in particular. Mooney (1896) still is the standard authority on the last days of the Sioux during the time of the Ghost Dance, while Utley (1963) presents the latest and most critical analysis of this same period.

Neihardt (1932) and Brown (1953), drawing upon the same revered holy man of the Sioux, Black Elk, as their source, have plumbed the deeper dynamics of the ancient Sioux religion and mysticism.

In summary, much of the large body of literature on the American Indian is of a romantic or emotional nature.

The above-cited books furnish excellent and reliable sources for the historical foundations of Indian behavior.

III. CULTURE CHANGE AND PERSONALITY STRESS

Culture, as one of the major determinants of personality, is recognized by most behavioral scientists (Spiro, 1959; Barnouw, 1963, p. 26). It is a basic Freudian tenet (Mead, 1947; Wallace, 1962, p. 179) that in the normal development of personality one undergoes severe stresses at various stages. Among the many responses exhibited by large numbers of people, great variations are to be expected, even in an homogeneous culture.

As Kubie points out (Kubie, 1957), all people are potential neurotics. Individuals who, for various reasons do not conform to cultural norms, are subject to psychic stress. There are people like this in all cultures (Hallowell, 1936). Normality and abnormality of behavior, therefore, must be judged in the light of one's cultural context (Benedict, 1936).

Opler (1959) writes that culture includes the transmission, through families and social units, of traditional systems of regulating behavior, ethics and attitudes. This transmission

> does not occur with perfect regularity and elements which ultimately are incorporated from the culture

> into personal functioning may, in a range of families and individuals, produce a series of problems best called mental illness....A culture is often enough in flux, or divided in its structures, to contain serious conflicts in values and action patterns, throwing whole families and individuals into states of empty, unsatisfying, or disturbed functioning (p. 9).

If a person lives in a constant state of worry, fear or threat, his body processes are kept mobilized on a chronic basis (Selye, 1956). Whether the source of the threat is physical or emotional, the resultant, chronic mobilization and resulting disorder may be the same. It is a matter of medical record that physical ailments which stem from prolonged emotional mobilization have become a major problem (Coleman, 1956, p. 133).

Coleman continues:

> Society, as well as individuals, can develop unhealthy ways....Such faulty development both lowers the stress tolerance of the group and provides a pathological climate for the rearing of its members. And in much the same way that the individual may show decompensation in response to excessive stress, society may undergo decompensatory changes which, in turn, affect the individuals in the group (131).

It is to this unhealthy state of our modern society, with its unreasonable competitive stress and goals unworthy of human beings, that Goodman (1962) assigns as the cause of the deviant behavior of modern juveniles. The frustrations of the "closed system" distorts behavior. As Stagner (1961) says:

> We may speculate that the child who has encountered too many frustrations may reject his parents, his society, and the values they represent; or, alternatively, that the aggressive tensions built up by these frustrations bring him into conflict with social rules so that he behaves badly (219).

Stagner further points out that children of low socio-economic status will experience more frustrations and more personality problems (p. 499) and Coleman says that these children are often ashamed of their parents and are quite hostile towards them (p. 144). Such stresses and anxieties not only cause personality maladjustments, but inefficient functioning in the classroom (Pacheco, 1963). Margaret Mead (1947) writes that our modern American culture is changing so fast that, not only are cultural conditions different from generation to generation, but any given generation of parents changes while the children are growing, with the result that the children do not get a constant, stable view of life and this makes for fragmented development.

Since behavoral deviation can be expected even in homogeneous cultures, where only one set of values is operating, *a fortiori* such deviation may be expected, and in greater variety and numbers, in situations where people are living under the stress of two sets of cultural values.

Malinowski (1945) was one of the first to point out the tensions and frictions inherent in cultural adaptation.

Kennedy (1961), for example, writes that culture change may create conditions of anomie and conflicting orientation within a community to the point where personalities are affected in an adverse manner. Leighton (1959), in the same vein, hypothesizes that rapid and extensive acculturation affects the mental health in a population and rapid acculturation can create social disorganization. If long sustained, this can lead to an increase in the number of psychiatric disorders in the group. Barnouw (1963), after presenting a thorough treatment of the cultural determinants of both personality and its disorders, claims that the major categories of mental illness, such as schizophrenia and paranoia can be found in all cultures, but there may be variations in behavior content and characteristic symptoms from one culture to another (p. 374). Paul Benedict and Irving Jacks had earlier noted this among primitive peoples (Benedict, Jacks, 1954).

Spindler and Goldschmidt (1952) similarly write:

> Persons in the transitional category, alienated as they are from the cultural symbols of their ethnic past and at the same time not having internalized the symbols which constitute the value system of western society, will exhibit more symptoms of personality disorganization than members of groups closely identified with the symbols of either of these culture types. (p. 80).

Thurwald (1954) describes the usual long period of rejection of the dominant culture on the part of the smaller cultural group which is followed by partial acceptance under stress.

Wallace (1962), one of the more highly regarded modern authorities on personality and culture change, says that culture change goes through four stages, temporally overlapping, but functionally distinct, though all are fraught with tension. The first stage is simply that of a steady, slow pressure to change. The second period, however, is

> The period of increased individual stress...the socio-cultural system is being 'pushed' progressively out of equilibrium...climatic and biotic change, epidemic disease, war and conquest, social subordination, acculturation, etc. Under these circumstances, increasingly large numbers of individuals are placed under what is to them intolerable stress by the failure of the system to accomodate the satisfaction of their needs. Anomie and disillusionment become widespread, as the culture is perceived to be disorganized and inadequate; crime and illness increase sharply in frequency as individualistic asocial responses (p. 147).

In the third stage, that of cultural distortion, groups are seen as attempting to adjust as individuals did in the second stage.

> Some members of the society attempt, piecemeal and ineffectively, to restore personal equilibrium by adopting socially functional expedients. Alcoholism, venality in public officials, the 'black market,' breeches of sexual and kinship mores, hoarding, gambling for gain, 'scapegoating' and similar behaviors which, in the preceding period, were still defined as individual deviancies, in effect become institutionalized efforts to circumvent the evil effects of 'the system' (ibid).

The fourth period is that of revitalization in which, through a transfer culture, there is constructed a new, Utopian image of socio-cultural organization. What is of interest (and which we will develop later) is that, after over 400 years, the majority of Indians have not arrived at this fourth stage.

Asserting that mental disorders are universal, Wallace (1962) also notes that cultural differences make for local differences in the content of the symptomotology and the occurrence of the disorders (p. 178). Of primitive groups, forced into cultural change, he writes:

> Anthropologists frequently have made note of the fact that primitive groups, who have been forced into situations of culture conflict and of partial, unorganized acculturation, seem prone to a higher frequency of the milder neurotic and personality trait disorders. Chronic anxiety and tension, psychosomatic complaints, alcoholism, narcotic addiction, delinquency and crime, witch fear, regressive or stunted personality development: such disorders proliferate under the conditions produced by culture conflict and partial acculturation...the position that culture change is associated with mental disorder has a certain obvious plausability (p. 184).

Wallace concludes by saying:

> Semi-primitive peoples, living on the shabby fringes of Western civilization, migrants in new lands, occupants of slum areas, and lower racial, ethnic, and socio-economic classes, generally are characterized by high incidences of both neurosis and psychosis (p. 185).

Spiro (1959), writing in the volume, Culture and Mental Health, reasserts "That culture and personality are interdependent variables is a proposition that today evokes almost universal assent" (p. 141). He adds that it is moreover widely assumed that some culture contact situations are more pathogenic than others.

> It is frequently noted in support of this view that contact between aboriginal and European peoples is a pathogenic situation par excellence. (ibid.)

Spiro concludes:

> Individuals whose life experiences were idiosyncratic developed mental illness either because extant cultural means for tension reduction were ineffective....or because these experiences gave rise to tensions for which cultural means for reducing tensions were nonexistent (p. 170).

Scott (1958), in a comprehensive review of the social and psychological correlates of mental illness and mental health, notes that the literature falls into two broad categories: a) The demographic-environmental, which relates the prevalence or incidence of mental disorder to diverse ecological and cultural factors; and b) interpersonal correlates, the social interaction processes in the development of social disorders. He observes that most of the studies show that the lower one goes down the socio-economic scale, the more psychosis one finds.

The classic study of mental illness and social class was that of Hollingshead and Redlich (1958). More neurotics are found in the higher socio-economic levels and the lower socio-economic classes exhibit a higher incidence of psychosis. Diagnostic biases may account for these findings. Riessman, Cohen and Pearl (1964) in a later survey of mental health in the lower socio-economic levels question the conclusion of Hollingshead and Redlich "that a distinct inverse relationship does exist between social class and form and extent of mental illness" (vii). The authors hold that one must appraise the various sub-groups and not the poor as a whole, but grant that "the prevalence of treated mental illness is related significantly to an individual's position in the class structure" (p. 16).

Within our own American culture, there are subcultures in depressed and lower socio-economic areas which are also undergoing the pressure of culture change from the more affluent levels of our society. Attendant maladjustments in personality and school performance are commonly observed. Reissman (1962) presents one of the most complete descriptions of the tragic consequences in the maladjustments of these lower groups. Shaw (1963), for example, claims:

> These children often have great difficulties in personal adjustment. Delinquency is more concentrated and destructive aggression more widespread in problem areas; psychoses and completely disabling breakdowns are disproportionately high. One reason is that they receive relatively little of the ego satisfaction, the rewards, and the feeling of belonging that society has to offer (p. 92).

Conant (1961) did much to draw national attention to the maladjustments and tragically low achievement of students, Negroes and Whites, in these slum areas. He ascribes the causes as cultural. Della-Dora (1963) writes on the same underachievement and maladjustment of the culturally deprived child and notes that "Parents exhibit apathy toward school and a high incidence of social or emotional maladjustment" (p. 227).

Studies by Ludeman (1930) of isolated colony children in this country, Sherman and Key (1932) of isolated mountain children, Skeels and Fillmore (1937) of orphanage children, Thorndike (1940) of culturally deprived children, Decter (1964) of Negro children in slum areas confirm reductions in intelligence and achievement as the children grew older.

Spiro (1955) noted that all the studies on acculturation show a positive relationship between acculturation and social mobility. Ethnic groups remaining in the lower classes are the least acculturated. "Social mobility...is a threat both to the group's social solidarity and to its cultural survival" (p. 1243). He concludes by saying, "That acculturation creates severe problems of emotional adjustment is a finding of all those who have dealt with this problem" (1248).

For Negro children in culturally deprived areas, Vontress (1963) suggests:

> A course in Negro history may be effective in helping the student acquire an historical frame of reference. A course in the psychology of adjustment may be an immediate way to heal wounded personalities, bleeding from self-pity, shame, and a lack of courage to achieve (p. 81).

Sachar (1965) stresses a similar theme relative to the status and history of the Jews in western civilization when he asserted that "No people can remain vigorous without a glowing pride in its past" (p. 326). Kaplan urges that teachers of culturally disadvantaged children be specially trained in order to understand their students:

> Especially important is the need to work with the entire staff of the schools involved. Many teachers, often unconsciously, may be psychologically rejecting these students; all teachers in such a program should have the opportunity to participate in in-service training to examine their attitudes, expectations, and practices in regard to these youngsters (p. 74).

In summary, all leading scholars investigating the dynamics of culture change report widespread personality stress and an almost inevitable increase of mental health problems.

IV. CULTURE CHANGE AND INDIAN PERSONALITY STRESS

Although much cultural variation exists among different tribes of Indians, there seem to be almost universal psychological characteristics of Indians in general. Concerning such common characteristics, Honigman (1961) states that "A number of reports...suggest quite convincingly that a high degree of psychological homogeneity characterizes the American Indian" (p. 123). As McNickle (1962) writes:

> In any case, Indian characteristics exist and remain in play after centuries of Indian-White association. The Dominican monks who in 1544

> described Indians as 'not acquisitive' and 'satisfied with having enough to get along on from day to day,' were describing traits that are complained of in modern times, by aggressive, hustling, white men (p. 8).

Four hundred years after this brief description by the Dominican monks, George and Louise Spindler (1957) were able to draw an almost identical, but more detailed, description of Indian personality in general. Summarizing certain widely shared psychological traits depicted by the Spindlers, McNickle writes:

> Restrained and non-demonstrative emotional bearing..generosity, expressed in varying patterns of formalised giving or sharing; autonomy of the individual...high regard for courage and bravery often patterned as aggressive acts against the out-group; fear of the world as a dangerous place... detailed, practical, and immediate concern in problem situations, rather than advance planning to prevent future difficulties....(ibid., p. 7).

Lesser (1961) makes a similar observation, noting that external acculturation is not the total picture.

> ....modern studies of Indian communities show that adoption of the externals of American life is not neatly correlated with accompanying changes in basic Indian attitudes, mind and personality... Studies among the Cherokees of North Carolina, for example-considered one of the Five Civilized Tribes for more than a century-and among the Navajos of the Southwest reveal the same inner Indian feelings about the world and man's place in nature, the same non-competitive attitudes, the same disinterest in the American drive for progress and change (p. 3).

The Spindlers (1957, 154-157) also distinguish four main classes of Indians, or four levels of acculturation. The first level refers to those who have changed very little from the time of their ancestors; they exercise all the old time virtues and will die that way. The other extreme is that of the completely acculturated Indian "probably not represented in many reservation communities today, for when a man reaches this stage in most situations, he leaves the reservation and is assimilated." Between these two groups is the reaffirmative native type, made up of younger men who have doubts about the traditional culture but continue to affirm it because they feel themselves thwarted in respect to the white culture. Finally there is the transitional type who is aggressive and unpredictable "shifting abruptly from one stance to another;" some of them passively withdrawn and others acculturation-oriented ..."suspended"...personality structure is "badly corroded by regressive breakdown." (p. 157).

Vogt (1957) writes that, in spite of pressure from the dominant culture, there are still basically Indian systems of social structure and culture perduring with varying degrees of vigor in different parts of the country. Vogt along with Hagen (1962) approves of the newly emerging Pan-Indianism as a source of identity and solidarity for the Indians, as well as a bridge between the two cultures.

Hallowell (1957), for example, found three distinct levels of acculturation among the Ojibwa: the traditional or unacculturated group, the transitional group, and the completely acculturated group. Yet, throughout the three levels, he found a clearly discernible constellation of personality characteristics identifying the aboriginal culture. Among the transitional and traditional types, he observed a cultural impasse and regression in personalities. Rorschach responses were similar to those of children with the result that "these regressive trends in their personality structure makes an optimum of mental health impossible under the conditions that confront them" (p. 366). On all three levels there were individuals who expect very little from others and who were not apt to develop close emotional ties. The traditional and transitional groups appeared to be characterized by introversiveness, with phantasy playing an important role. Among the most advanced group, he found that the strains of acculturation had taken its toll. These people exhibited a weakening of the rigid control characteristic of the traditional Ojibwa personality, but without the acquisition of any new compensating factors. There has thus emerged an apathetic type of personality "with a great paucity of inner resources" (p. 352).

Concerning the children of these people, Watrous (1949) noted the same general pattern, with the most acculturated showing the greatest of stress. Barnouw (1963) cites Watrous in describing these children as "oversensitive, hypercritical, with fearful attitudes toward people, emotional aggression, underlying psychic conflicts, and an unsatisfactory rapport with their surroundings" (p. 252).

Hallowell (1938) had previously pointed out that, although some Ojibwa fears seem irrational and neurotic to us, they are not to the Ojibwas; in fact, if an individual had not reacted to these culturally induced fears he would have been neurotic. People in a given culture who manifest quantitatively and qualitatively different phobias from the rest are therefore regarded as disturbed. "From an etiological standpoint, genuine neurotics will remain comparable insofar as we can account for their behavior in terms of common dynamic processes" (p. 47).

Wallace (1962) referring to Hallowell's regressive personality findings in the Ojibwa writes:

> The 'marginal man,' indeed, is an ideal type constructed to label persons caught precisely in the vortex of such dilemmas, unable to forsake the old culture, yet, because of experience of the new, unable to be happy in either (p. 162).

Kaplan (1954), in evaluating the Rorschach as one of the principal instruments used in cross cultural personality research, including that of the Indian personality, concludes that responses vary, careful interpretation is needed, and that this particular technique is far from perfected. Instead of abandoning this instrument, he urges further study with it in order to make it as effective as possible.

Arthur (1941) found somewhat different results in her research on the Chippewa (Ojibwa) children at Ponemah on the Red Lake Reservation. Noting that "intelligence quotients ...seem to have little value as a basis for predicting what these children can do in life situations," (p. 188) she concluded that these children are fairly well adjusted:

> ...as nearly as I could make out, there is little mental illness and the little that does exist is organic rather than functional....A people who have courage, who can meet deprivation with dignity, who have perspective in seeing themselves in relation to the universe and who can exact the maximum pleasure from the present moment, are likely to be an emotionally comfortable people, not given to psychosis, suicide or other exaggerated reactions (p. 194).

In a study of a highly selective group of Indian high school seniors, Arthur (1944) found that in comparison to the control group of youth of the same age (university freshmen males and females) the latter scored higher than Indian boys on the psychopathic scale of the MMPI and Indian girls showed a slightly greater tendency to depression than did the white university girls. Indian students also revealed less of a tendency to hysteria than the university students. She concludes that, as a group, they give evidence of good emotional adjustment:

> Apparently they are more highly organized nervously than the university group with which they were compared. They seem to react to more stimuli and be more aware of what goes on inside and outside themselves than are the white students of about the same age, but with more academic training. The Indian students give evidence of

> being objective in their observations. They look at themselves and others fairly critically. They are more like the adult white group than like those of their own age in seeing below the surface and not taking things at their face value (p. 250).

Seward (1958) conceptualizes personality according to the following schema: identification, expressive styles, ego defense systems, and moral controls. When one or the other is weak within a society or because of culture conflict, there is likely to be resulting stress and maladjustment.

> In cases of submerged subcultures which fail to give their members a rationale for positive identification, there will be few inner resources with which to combat the unmitigated threat from without. Individuals reared in such subcultures can hardly escape ambivalence in their self concepts (p. 4).

Spilka and Bryde (1965) found support for this contention. Seward, in recalling the emphasis in the literature in recent years on the importance of aggression as a factor in personality development and socially approved means for its release, cites the example of Hopi childhood aggression and the inevitable stress caused by conflict through its expression in a white contact situation.

> In considering aggression among the Hopi, it should be explained that the young Hopi child is customarily indulged and literally 'lord of the manor' as far as his immediate surroundings are concerned. The adults in his environment cater to his needs and desires, so that the Hopi child discovers early in life that aggressive behavior brings prompt and effective results. Rather suddenly, however, at school age, this pleasant state is interrupted, and the child's relatively unrestrained personality is molded into its conceptually ideal pattern of a smooth, selfless, cooperative being. The egocentric, aggressive

> behavior which had been so pleasantly effective and easy during the first few years of life is the antithesis of that which is now expected of the young Hopi...creating...new sources of frustration (p. 165).

Writing in much the same vein, Wallace (1959) in studying the institutionalization of cathartic and control strategies in Iroquois religious psychotherapy, discerns a shift in emphasis from catharsis to control, as the Iroquois moved from an organized to a disorganized sociocultural situation, with its attendant stresses and strains. This shift is:

> ...congruent with a general hypothesis: that in a highly organized sociocultural system, the psychotherapeutic needs of individuals will tend to center in catharsis (the expression of suppressed or repressed wishes in a socially nondisturbing ritual situation); and that in a relatively poorly organized system, the psychotherapeutic needs will tend to center in control (the development of a coherent image of self-and-world and the repression of incongruent motives and beliefs) (p. 182).

Voget (1956) writes that in forced cultural change, some societies resort to nativistic movements, while others do the opposite, i.e., passive resistance or apathy to the dominant culture so that:

> ...the disorganizing and restraining effects of a pervasive anxiety so predominates that at best a passive or adjustive nativism emerges. In such instances, compulsive hostility and anxiety seem to immobilize individuals, setting them adrift between two cultural worlds (p. 249).

He cites Macgregor's description of the Pine Ridge Sioux as illustrative of passive or adjustive nativism, but doubts that it extends to the majority of the Sioux. He writes that Peyoteism and Shakerism are reformative nativistic movements, which, although not encompassing the majority, represent a movement toward pan-Indianism.

Mead (1932), using the fictitious name of the Antler Tribe, describes the deleterious changes in a real American Indian tribe caused by contact with the White culture. As the dominant culture breaks down the native culture:

> Within this disintegrating social structure, the individual develops a formless, uncoordinated character...the primitive culture breaks down and the individual member of the primitive society is left foundering in a heterogeneous welter of meaningless, uncoordinated and disintegrating institutions (p. 222).

George and Louise Spindler, writing in one of the great foundation volumes of Psychology (Koch, 1963), outline the convergence of psychology and anthropology in the study of culture change. They analyze psychological constructs in Siegel's sample of 94 books and articles on acculturation from 1929 to 1952 (1955) as well as a similar anaylsis of all articles on culture change published in the American Anthropologist from 1952 to 1962.

Accepting the "now well-established conception of functional correspondence between personality and social structures," (p. 530) they point out that in rapid cultural change, established cultural patterns "may even become dysfunctional and therefore threatening to the individual who is trying to adapt to the new situation...behaviors become comparatively, though never wholly randomized" (p. 516).

They cite three postulates of Osgood (1960) concerning the growing emphasis on cognitive theory for culture-change studies, in which one can see the conflict and anxiety intrinsic to such change:

> 1) Cognitive modification results from the psychological stress produced by cognitive inconsistencies....It is clear that rapid and disjunctive culture-change situations provide a legion of cognitive discongruities....How long can he tolerate the stress induced by this discongruity?
>
> 2) If cognitive elements are to interact, they must be brought into some relation to one another ....This can be interpreted as one way of resolving cognitive discongruity - by compartmentalizing the cognitive elements so that they are not brought together in such a way as to induce stress.
>
> 3) The magnitude of stress toward modification increases with the degree of cognitive inconsistency ....In rapid and disjunctive culture-change situations, the degree of cognitive inconsistency may become so great that the stress induced cannot be coped with and the individual stops trying to reduce inconsistency. He withdraws and becomes totally passive....It seems probable that native-oriented groups on American Indian reservations recruit new members largely through this process....The situations created by rapid culture-change are ego-threatening, and consequently, anxiety arousing (p. 547).

Gillin (1942), James (1951), and Boggs (1958) also write of the personality stress inherent in culture-change.

More recently, much attention is being given to Indian mental health problems, especially in school children, caused by the cultural conflict. Hoyt (1962) simply writes that three hundred years of mental and cultural disturbances among Indians have accompanied contacts of Indians and Whites in the United States. She regrets how widespread are the mental health problems of people undergoing cultural change and how little we know of constructive measures to deal with them. She also quotes the Spindlers in claiming that the great majority of Indian adults stood between the old and the new in various degrees of confusion, anxiety and insecurity. In analyzing the essays of 582 Indian students, fifteen to seventeen years of age, Hoyt found few references to tribal values. Whereas, White pupils of the same age were concerned with *which* job to choose, the Indian youth were anxious about getting any kind of a steady job, albeit on a lower economic level. Indian youth also showed more humility of ambition and much less confidence than the white students.

V. EDUCATION AND INDIAN PERSONALITY STRESS

In efforts to understand these difficulties more fully, Cobb et al (1960) are studying emotional problems of Indian students in boarding schools and related public schools plus ways and means of solving them. Zintz (1958; 1962) has investigated how different cultural values can cause maladjustment and underachievement in the classroom. Most recently, he (Zintz, 1963) has engaged in an effort to instruct teachers in the values of Navajo, Pueblo and Spanish-American children in order to understand and teach them better. He also notes that lasting contact of two cultures causes friction and maladjustment and "as minority ethnic group children progress through the school grades, their achievement falls farther and farther behind" (p. 117). Marinsek (1958) points out the same lack of achievement in the classroom caused by different cultural values and supports the position of Zintz that, in order to have any success in the classroom at all, the teacher must be aware of the values of the students. He also provides an outline of Pueblo values.

Coladarci (1960), concerning Indian students in the Southwest writes:

> There is, as would be expected, a correlation between intellectual ability and scholastic achievement; but approximately 75% of the variation in achievement in any group is not explained by variation in the measures of intellectual capacity of the students. It must be accounted for by other factors such as motivation, level of aspiration and emotional blocking (p. 25).

He hypothesizes that the negatively accelerated curve reflects a school curriculum that becomes increasingly dysfunctional for the Indian student and this approaches a "requirement of failure." What teachers regard as proper school objectives, rewards and punishments are thus decreasingly shared by the Indian children as they progress from grade to grade.

Sasaki (1960) writes, concerning the Indian reaction to a White classroom situation:

> Rapid change from the Indian way of life may leave the Indian with the problem of being confused as to which set of rules to live by. The difficulty of making decisions in this situation may result in emotional problems. The Indian may withdraw from situations where he has to make such decisions or he may even go back to tribal ways altogether... much work needs to be done to relate types and symptoms of mental illness to the various acculturation situations (p. 5).

Leon (1960) delineates some symptoms of Indian maladjustment in school:

> Learning difficulties may also be symptoms of emotional maladjustment....First and most simply a child may be so fearful that he cannot concentrate. If he is a withdrawn, well-behaved child, this anxiety may be overlooked. Or a child may be rebelling against his parents and authority. In this case, refusal to learn is a way of expressing hostility....Children who are depressed tend to be withdrawn and lack the energy and motivation to learn...other behavioral symptoms of emotional unrest...are such things as restlessness, stealing and running away and sexual acting out in adolescents (p. 15).

Greene (1964) in an investigation currently underway of Indian student behavioral problems says that the general cultural and environmental circumstances of a given group of children can produce problems of adjustment which may not readily be observed in overt behavior. He seeks to identify problems of adjustment of the students to school and adjustment problems of the staff to the Indian students.

Segel and Ruble (1962) investigated, in a transitional neighborhood, student values, needs and adjustment problems with a view to enlightening the school staff and orienting the school facilities toward better guidance and adjustment of the students. A school of the Junior High School level was chosen because "the symptoms of maladjustment in both personal and social adjustment, variations in achievement, and changes in aspirational level seemed to become acute during the junior high school years" (p. 1).

Ulibarri (1960), writing on teacher awareness of socio-cultural differences in multicultural classrooms, points out that tension can arise between the teacher and the class if the teacher is not aware of the cultural values of the children. The cultural setting to which he referred was the Southwest, where the teacher frequently has three different cultures in one class, Indian, Spanish-American and Anglo.

Finally, all the struggles and frustrations of the Indian people are poignantly epitomized in the real flesh and blood struggle of Polinqaysi Qoyawarma, an educated Hopi woman and successful teacher. After struggling for years to gain an education and after teaching her people for many years, the misunderstandings and suspicions of both the White and Indian people became almost unbearable.

> She became silent, introspective, brooding. Once more she was trapped in a spider-web structure of suspicion, based on her own fears. The more she tried to push it away, the more entangled she became. The sense of rejection

> which had haunted her all her life bowed her spirit down with grief. Because of her Hopi heritage, she told herself, she would never be fully accepted by the White world, and her own Hopi people resented her interest in that world and her ability to work in it. Which way could she turn? (Qoyawayman, P. and Carlson, V., 1964, p. 152).

VI. CULTURE CHANGE AND SIOUX PERSONALITY STRESS

If other Indian tribes have resisted acculturation with attendant stresses, *a fortiori*, the Sioux, the greatest of the Plains Indians who "haughtily dominated the heartland of the Northern Plains for nearly a century," (Hassrick, p. 57) could be expected to resist even more vigorously, with even greater stresses. One has to live among the Sioux of today only a short time before he is aware of the fierce pride of race that they still have. Of the Sioux living only a hundred years ago, Hassrick wrote:

> To characterize the Sioux as anything less than vainglorious would be inaccurate. Their arrogance was born of successful conquest....They could hardly help being aware of their great power. The Sioux were far more than aware: they were overbearing in their vanity (p. 67).

The Sioux were forced by sheer weight of numbers to submit to the White man's ways. Still conscious of their superior past, it is no wonder that the Sioux, of all the Indian tribes, resist most bitterly the overtures of the Whites for acculturation.

Goldfrank (1943) writes:

> The Teton makes little effort to adjust himself to the 'civilized' life. The old live in the past, the middle aged on their right to rations, the young accept their lot without joy, the children without hope (p. 82).

Mekeel (1936) described the current economy of the modern Teton Dakota community, with its destitution, apathy and poverty. Malan (1963) delineated the ancient value of the Sioux, showing how it is still operative today. In an earlier work (1961) on the socio-economic status of the Sioux today, he relates employability directly to degree of acculturation. Large numbers of Sioux driven by poverty, have gradually drifted to nearby cities. White (1959; 1961) and Lovrich (1951) have studied the tragic effects of personality disintegration caused by the increased contact with White culture in the urbanization of the Sioux. Hurt (1961) made a similar study in the urbanization of the Yankton Sioux.

Hagen and Shaw (1960) characterized the Sioux of today as "being passive, apathetic, and hostilely dependent" (p. 8). Mekeel (1936, B), observing the conflict and tension in Sioux children in the classroom writes that the Sioux:

> ...still holds to certain life values or to certain patterns once expressing those values, which definitely oppose the assumption of certain American values and the configurations on the part of any individual of that community....The great failure of Indian education is that, along with specific knowledge, the life values and drives possessed by a white community have not been, and perhaps cannot be, transferred to the Indian. Without that transfer his knowledge is useless (p. 155,157).

Perhaps the most discerning analysis of Sioux personality tensions is that of Erikson's (1939). It must be pointed out, though, that at the time Erikson wrote, the Sioux were still relatively organized and isolated from frequent and pressing contact with the Whites. It was after the Second World War, with the return of the veterans that the demographic picture began to change. After 1945, when horses and wagons were still common family transportation, second hand cars began to appear, access to liquor and nearby towns made available, and the general contact area widened and increased.

Of these Sioux before World War II, Erikson wrote that they thought it was the Whites who, in many respects, were abnormal. The Whites, for instance, let their babies cry and spanked their children. In order to understand the school performance of Sioux students, Erikson continues, we must look at his behavior in the light of his conscience. School discipline is successful only in so far as it is an extension of the parents' conscience, and an Indian school is by no means the extension of the parents' conscience.

> In the vast majority of the problems of Indian education, a neurotic conflict cannot be present because, for one thing, the white teacher has never really been accepted as representing in any way the parents' philosophy or the child's conscience.... This, it seems is the most astonishing single fact to be investigated: Indian children can live for years, without open rebellion or any signs of inner conflict, between two standards which are

> incomparably further apart than are those of any two generations or two classes in our culture.... Adjustment takes the form of a general and intangible passive resistance against any further and more final impact of the white standards on the Indian conscience than toward neurotic tension. (p. 122,124).

Erikson holds that since the Sioux child does not have a "bad conscience" in not cooperating with the White teacher, he does not have neurotic conflicts.

Outbreaks of delinquency should, therefore, not spring from lack of conscience but from an impasse created by the contact of two opposing systems of consciences. Strictly neurotic and psychotic states exist when one's actions set him apart from his own people, and this is not true here, contends Erikson.

The Sioux, forced to depend on the Whites who were an enemy far greater than any inimical Indian tribe,

> ...developed an attitude toward past and future which is something comparable to the compensation neurosis in individuals in our culture....How this attitude affects the mental state of individual members of the tribe deserves systematic investigation; one would probably find much character malformation (with increasing petty delinquency) both in the Indian and White sense....On the other hand, the very fact that the Sioux can afford to avoid a testing of his communal strength on the realities of today, allows him to preserve an anachronistic system of child training which remains the continued source of inner peace under deserate communal conditions (Erikson, 1939, p. 151).

Erikson says that he voices the suspicions of many others that, even if the buffalo and Black Hills gold were returned, the Tribe would never forget its traumatic defeat, and habits of dependence, and further would not be able to create a community "adapted to the present day world which, after all, dictates to the conquerors as well as to the conquered" (p. 105). Even if "turned loose" today to work or starve, "...it would in all probability only serve to demonstrate how socially sick the Tribe really is and how unable to manage aggression" (p. 152).

It is almost psychologically impossible for individuals to escape this cultural pathology. Erikson quotes Mekeel as saying:

> There is an almost malicious attempt to keep a man to the level of his fellows. If he is ahead in wealth, he is eaten out; if ahead by virtue of position, he is calumniated. But how much conscious malice there is in it is impossible to judge (p. 117).

After over fifty pages of intensive analysis, Erikson concludes in a rather pessimistic tone:

> The second possibility (other than "turning them loose") would be the proper influence on and the wise utilization of the Sioux child's early education...even if this is done, they will probably join the racial minorities of the poorer American population....Unavoidably, the psychological effects of unemployment and neurosis will be added to the tuberculosis, syphilis, and alcoholism which the Indians have acquired so readily. In the long run, therefore, only a design which humanizes modern existence in general can deal adequately with the problems of Indian education (p. 152).

Eleven years later, Erikson (1950) noted that the Sioux had sunk even deeper into his compensation neurosis.

"He receives all his sense of security and identity out of the status of one to whom something is owed" (p. 103). The old time Indian virtues have even more become vices in the modern confrontation.

Macgregor (1946), in one of the standard works on the modern Sioux, wrote that the Sioux child finds the world quite hostile. "The behavior of adolescents reflects an almost sudden withdrawal, confusion and inability to find a satisfactory role" (p. 195). Adolescent boys, in particular, were frightened, unsure of themselves, felt the ill will and unfriendliness of society and since life on the reservation for them seems empty, they tend to retreat from life (p. 195). Results for all subjects on emotional response tests were,

> ...an index of their delinquent behavior, their lack of opportunity to express aggressive impulses in socially approved ways, and their reaction against the felt hostility of their environment (p. 195).

Macgregor found much fantasy escape,

> ...which is poor preparation for the actualities of life, to say the least. The conflict of these daydreams with the realities of modern life on the reservation and of white society adds to the insecurity and the resultant anxiety in the child's mind....The Dakota child personality seems crippled and negative, as if it rejected life. The unfriendly environment, which offers so little opportunity or satisfaction, retards the growth of personality and prevents it from becoming positive, rich and mature. Life is lived on the defensive (p. 207,209).

Havighurst and Neugarten (1955) tested one thousand Indian children from the Papago, Hopi, Zuni, Zia, Navajo, and Sioux tribes for their types of emotional and moral responses, rewards and punishments, and compared them with seven hundred white children from a midwestern city.

What is pertinent here is that the Sioux children showed no identification with the father as a source of fear (p. 65), but had fewer guilt feelings, from conscience, rather than from self consciousness than any of the other Indian groups. Hagen (1962) states that the fathers are rejected as "ineffective models" (p. 498). In the psychoanalytic theory, then, the Sioux child would have a weak super-ego, with hardly any norms internalized. Self conscious of the censoring attitude of the dominant culture, he would possess a high anxiety level in a White contact situation, such as a school. Of the persons involved in sadness responses, the Sioux father accounted for only four per cent, compared to thirteen per cent for White fathers. Sioux mothers, on the other hand, accounted for fourteen per cent of sadness responses, and White mothers accounted for fifteen per cent.

Personal failure and inadequacy, as a source of shame, accounted for only one per cent of the responses of Sioux boys, compared to nine per cent for the Sioux girls, and twenty-two and twenty-one per cent for the White boys and girls respectively. This would seem to indicate a sad lack of pride and identity in the Sioux boys.

> Thus we find the Midwest and Sioux boys consistently giving more attention to the mother than to the father in all four roles - rewarder, praiser, punisher, blamer....What appears to be the case, then, is that the father's role is a less important one in the life of the Midwest and Sioux boys than in the other tribal groups and that in these two societies, the mother takes a more important place in the boy's life (p. 196).

Pertinent to these findings is the statement of Seward (1956), comparing the Pine Ridge Sioux men and women. Compared to the Pine Ridge Sioux women,

> ...the men have suffered great losses of respect through their inability to find work. The gross discrepancies between the roles for which their training fitted them and those actually open to them under present circumstances, have made the contemporary fathers a lost generation. The grandfathers can still take pride in outmoded traditions and live on memories, but they cannot provide realistic models for their sons to follow. They are, if anything, models to be avoided.... Instead of stirring the ambition of the contemporary Sioux, their only effect is to make them feel inferior to both their own great past and the modern American culture. Inability of these hapless Indians to find an identity in their foster society has led to family disruption, delinquency, and ego breakdown expressed in emotional withdrawl, apathy, and a generalized rejection of life (p. 230).

Lee (1962), writing on responsibility in the Dakota value system, says that responsibility arose from feelings of relatedness with the universe. The self was coextensive with the universe, yet completely autonomous. Children were assigned tasks, but never supervised, in order to develop their autonomy. Coercion and persuasion were unacceptable to them since no person could decide for another.

> Autonomy was a prerogative of all, young and old, men and women. Children learned early to act at their own decision....it was a tenet of the society that no man could decide for another (p. 65).

It is evident that the exercise of this traditional value would cause much frustration in the white world for the Indian child.

Wax and Wax (1964, B), studying the Sioux child in modern White schools, observed that tensions arising in the school situation are not so much between the child and the school as between the child and his peer group.

> Teachers do encounter difficulties in conducting their classes, because some pupils do not wish to recite publicly or do not wish to be placed in a competitive situation with their classmates. The difficulty here is not one of direct conflict with White and Indian values, so much as a struggle between school and Indian peer society. This peer society tends to organize about a set of values and behaviors quite distinct from those formally espoused by administrators as suitable for pupils (p. 114).

The peer group, in turn, is sabotaging the educational process more than parents and teachers realize. Frustrated and suppressed as they are, however, the Waxes in another publication (1964, A) noted "a people whose lust for life reminded us of the descriptions of Restoration England..." (p. 18).

It is of interest to note that Devereux (1951), using largely dream analysis in the psychotherapy of a Plains Indian, reoriented him to the reservation. Since the breakdown of the Indian was caused by his inability to face the White man's world and live in it in daily contact, the major emphasis in the therapy was to restore identity by orienting the Indian toward the reservation where he was more comfortable. Despite the current misery of reservation life, Hagen (1962) foresees change for the better in the not too distant future.

In summary, studies to date on the Sioux have shown that the cultural impact has taken its toll in obstructing the development of the young Sioux personality. The young Sioux people meet the demands of the dominant culture with a passive resistance. This in itself, however, causes hostility, withdrawal and a general feeling of rejection. They cannot turn back and are not motivated to go forward. They are truly caught between the cultural stresses of the old world and the new.

VII. THE INTELLIGENCE OF INDIANS

In one of the early studies of the intelligence quotients of Indian children, Rowe (1914) tested 268 Indian children and 547 White children with the Binet-Simon scales. The Whites scored higher than Indians in every area. The Indian children were, however, weaker in comprehension and definition than in pure perception and memory. Goodenough (1926), using her Draw-A-Man test, found that among 16 different racial groups tested, southern Negroes and Indians placed lowest, with mean I.Q.'s of 78.7 and 85.6 respectively. She pointed out that the rank order of the groups corresponds with the results of other investigators who employed verbal tests.

Garth, Serafini and Dutton (1925), Fitzgerald and Ludeman (1926), Garth, Shuelke and Abell (1927), Jamieson and Sandiford (1928), and Telford (1932) studied the intelligence of Indian groups using instruments standardized on White children. The mean I.Q.'s reported in these studies range from 69 to 88. Arthur (1941), in testing Chippewa children, found that the I.Q. was of little value for predicting behavior in real life situations. Peters (1963), employed four different intelligence tests on Hopi children, and observed that peak performance was attained in the third and fourth grades, and then followed by gradual and consistent declines in apparent capacity.

It is of interest to note the difference in intelligence scores when the Indian groups are divided into groups by degree of blood. The most common divisions are: one-quarter Indian blood, one-half, three-quarter and full blood. Garth, Shuelke and Abell (1927) and Hunter and Sommermier (1922) found a coefficient of correlation between degree of White blood and I.Q. scores of .42 and .51 respectively. Hanson (1937) found that half-bloods excelled full bloods.

Even though degree of Indian blood correlates negatively with intelligence, current psychologists are loathe to ascribe a genetic difference as the reason. All argue for cultural differences (Shuey, 1958). Full blood children tend to be culturally farther away from the dominant culture than one-quarter blood children and should be expected to score lower than White children and quarter-blood children. Coombs, Kron and Collister (1958) had noted that most of the city dwelling Indian students were mixed-bloods and most of the reservation dwelling Indian students were full bloods.

Bryde, Van Doornick, Elkind and Spilka (1965) found a significant coefficient of correlation of .641 for quarter-blood Indian children in ambiguous picture tests, while full blood children had a coefficient of correlation of .125. They also found that the majority of the mixed-blood Indian children lived in towns and the majority of full blood children lived on the reservation.

In support of cultural variables as the basis for lower I.Q. scores among Indian children, the study of Rohrer (1942) is eminently pertinent. Rohrer hypothesized that if Indian children could be found who were equal to White children in socio-economic level, cultural opportunities and comparable schooling, there would be no difference in their I.Q. scores. He found such a group in 235 Osage Indian children who lived in circumstances similar to their White neighbors and were on a par with them educationally, economically and culturally. He found no significant differences between the Indian children as a whole with the White group, nor any significant relationship within degrees of blood.

VIII. THE EDUCATIONAL ACHIEVEMENT OF INDIANS

It has been noted earlier (Ludeman, 1930; Sherman and Key, 1932; Skeels and Fillmore, 1937; Thorndike, 1940; Decter, 1964) that culturally deprived children show not only less achievement and lower intelligence quotients, but drops in achievement and intelligence as they grow older.

The same findings can be expected from Indian children and all studies bear out this expectation.

Symptomatic of poor performance in the classroom and compounding the Indian educational problem is the high dropout rate. As Thompson (1963) writes:

> Sixty percent of Indian high school students did not stay in school to graduate. Comparatively speaking, the Indian high school dropout problem at that time (1958-59) was about fifty percent greater than the national dropout rate (p. 1).

Havighurst (1957) claims that, although the Indian students have innately the same ability, they have different motivation. Since they are not competitive, but cooperative, their culture does not prepare them for traditional academic work. As a result, they achieve less and less as they grow older.

Cowen (1943) tested Indian students in the state of New York. Although the mental ages of the grade school children were above the grade norms, 46 per cent were achieving below their grade norm. All the Indian high school students had mean achievement scores below the mean of the White ninth grade students. Turner and Penfold (1952) found their Indian group with significantly lower scholastic aptitude than a control group of White students. Witherspoon (1962), in testing Ute children, revised and modified tests to minimize verbal content, eliminate separate answer sheets and time limitations. The Indian children were consistently below White children in all tests and areas. He likewise found the separation of the Indian and White groups to become greater as they progressed through grade school. Kayser (1963) also studied Ute children and obtained similar results. Peak performances for these children were in the third and fourth grades. He holds that Anglos achieve better from the sixth grade on because attendance at college is a more realizable goal for them and motivates them accordingly.

Townsend (1963) studied the reading achievement of eleventh and twelfth grade Indians in New Mexico. He found for this group that "Indian students generally achieve at least five years below grade level" (p. 10), and recommended better preparation of teachers for Indian students. Rist (1962), also found Shoshone Indian students to be considerably lower in basic skills than White pupils in the same school. Shoshone children apparently make normal progress to the fourth grade and begin their drop in achievement in the fifth grade. He hypothesizes that, in the lower grades, the White and Indian children are "less cognizant of each other," but that in the middle grades, this feeling increases with the results that "in the junior high school grades it becomes so prevalent it is detrimental to learning" (p. 58). This interpretation appears rather superficial.

Lloyd (1961) studying Indian and White students in an integrated school found that both Indians and Whites decreased in mental maturity scores as grade levels increased. Safar (1964), however, in testing Shoshone and Arapahoe students, who live next to one another, found no decrease in mental maturity scores of Indians and non-Indians with increasing grade levels. Although Safar's Indians were below Whites in general in maturity, achievement and personality scores, he writes:

> The data in this study clearly demonstrate that Indian pupils are achieving as well as can be expected when compared to their non-Indian classmates....The academic progress of Indian pupils will be facilitated when it is reasonably certain teachers no longer have the belief the Indian pupils are under-achievers (p. 63,64).

Currently, there is much research underway to solve the Indian educational problem and "get through" to the Indian student. Prominent in this field is Roessel (1962) who is doing much to educate teachers of Indian students to understand the Indian child in his given culture. The Annual Conference of the Co-ordinating Council for Research in Indian Education, sponsored by the Arizona State Department of Public Instruction (1962; 1963) publishes annually the results of on-going research in Indian education. Arizona State University (1960) offers a master's degree in Indian education. Quimby (1963) researched variables in the cultural and academic areas in order to discriminate successful and nonsuccessful Indian college students. Variables in the academic area, such as grades in high school were more significant than variables in the social area.

Zintz (1963) has already been cited in his efforts to train teachers to teach Indians. Largely because of him, the Tutoring Counseling Program for Indian Students at the University of New Mexico was formed to prepare promising Indian high school graduates for college by intensive summer school work and counseling. The Navajo Orientation Program, sponsored by the Navajo Tribe, seeks to do the same thing for their students.

In these several programs, not only are basic skills built up, but every effort is made to orient potential Indian college students toward a way or a style of life which will be a combination of the two cultures. As Angers (1960) notes, a person will approach a learning task when it is felt to be associated with his notion of success. "Educational influences are likely to be accepted only when they seem to hold a promise of success for the individual's style of life" (p. 181).

In summary, investigations of educational achievement of Indian students show almost universally poorer achievement when compared to White students. Most researchers agree that cultural, not genetic, factors make the difference in the relative achievements of Indian and White students.

IX. THE EDUCATIONAL ACHIEVEMENT OF SIOUX STUDENTS

A number of studies have been conducted on Sioux students. Macgregor (1946, p. 187), for example, found that Pine Ridge Sioux children scored above average on the Arthur Point Performance Scale and the Goodenough Draw-A-Man test.

Peterson (1948), Anderson Collister and Todd (1953) and Coombs, Kron, Collister and Anderson (1958) have all made extensive surveys of the achievement of Indian students, including the Sioux, finding generally lower educational achievement for Indians than Whites. In general, children who attend public school perform better than those in reservation federal schools. Anderson et al (1958) found peak performance in the fourth grade.

Artichoker (1957), in an extensive study of Sioux high school students, found their performance to be low relative to comparable White South Dakota pupils. In another study, Artichoker (1958) found that among 1,404 Indian children in grade school during the 1954-1955 school year, 27.8 per cent were over age for their group. During the 1957-1958 school year, the number dropped to 22.3 per cent. Truancy and late enrollment in the first grade accounted for 54.7 per cent of the students. In studying Sioux college students (Artichoker, 1959) further found that poorer academic training, lack of money, concern about family affairs and inability to relate educational and vocational objectives to the future, were major causes for maladjustment and dropout in college.

Deissler (1962) observed that Sioux students scored below the state norms in all educational areas. It is of interest, though, to note that these pupils ranked as a group, in the 51st percentile in interpreting reading materials in the natural sciences.

Ross (1962) compared academic achievement and attendance patterns of full blood and mixed-blood Sioux students in a federal school. He found that the mixed-blood students missed fewer days of school, were socially more mature, and scored higher on achievement and intelligence tests than the full blood group.

Krush, Lello and Warner (1961) compared five different school grades of Sioux children and Whites in the same community between 1959 and 1961. The Indians consistently achieved much lower than did the Whites. Kizer (1940) earlier had obtained similar results. Although the intelligence quotients of his Indian group were almost normal, they were retarded about two and a half years in academic achievement.

Galuzzi (1960), using SRA Tests of General Ability which are supposed to be culture free, obtained a mean score for his Sioux Indian group 14 points less than White students in an integrated school. Seventy-eight per cent of the Indians scored in the low average range, while only 41.2 per cent of the Whites responded similarly. Among the latter, 15.6 per cent were in the bright to superior range, in comparison to .9% of the Indian children.

Bollinger (1961) also compared the achievement of Sioux and White students in an integrated school. He wrote that "Indian pupils in grades 4, 5 and 6 scored above national norms on the California Achievement Test, while Indian pupils in grades seven through twelve scored below national norms on this test" (p. 41).

Johnson (1963), used the Michigan M-Scale to assess motivational factors in the academic achievement of White and Sioux students. On the total test, which has five scales, the White students scored higher than the Sioux.

> The difference in academic ability as measured by the DAT-VR (Differential Aptitude Test, Verbal Form; one of the sub-tests) indicates that the Indian male and female have significantly less aptitude to achieve in school work than the Caucasian students have...the DAT-VR is a more effective predictor of school achievement for the Indian than the M-Scale...but a combination of the DAT-VR with the M-Scale is a better predictor of grade point average for the males than for the females (Indian) (p. 62).

One of Johnson's hypotheses that factor analysis of the scores for Indian males would yield a motivational factorial structure different from that derived for the White students was not supported.

Attempting to assess the role of alienation in academic achievement, Spilka and Bryde (1965) found alienation and its components, powerlessness, normlessness and social isolation to be significantly negatively related to achievement among 105 Sioux students in an Indian high school.

The latest and most comprehensive compilation of the achievement of Sioux grade school children are on file in the Aberdeen Area Office of the Bureau of Indian Affairs (1965). On the California Tests, these are the mean achievement scores, by grade, of all the federal Indian schools, thirty-eight in number, in North and South Dakota:

Grade	Norm	Average	N
4	4.1	4.3	636
5	5.1	5.2	627
6	6.1	5.8	667
7	7.1	6.9	618
8	8.1	7.7	624

In summary, the educational achievement of Sioux students, after about the sixth grade, is considerably less than that of White students. One can see, however, that each year Sioux students achieve slightly better than the previous year, and that Sioux students living in town environments achieve better than Sioux students on reservations.

CHAPTER 3

STATEMENT OF THE PROBLEM

The purpose of this research is to determine the factors that cause Sioux Indian students, after achieving satisfactorily for several years, to demonstrate a reversal of this process, namely, a steady decline in achievement. This problem does not pertain to any one Sioux Indian school in particular, but to all such schools whether private, public or federal.

It is the observation of educators of Sioux Indians that, apart from an initial, native shyness, Sioux youngsters are perfectly normal in their emotional responses when they first come to school. It takes the young Sioux student about three years to become acclimated to this new situation. During this time, which roughly comprises the first three grades, Sioux Indian students, as a group, do not come even close to national norms on standardized tests (Pine Ridge, 1964; Holy Rosary Mission, 1964). At that time, these children thus range from six months to a year and half behind standardized achievement norms. Their I.Q.'s, however, are perfectly normal (Bryde, Elkind, Van Doornick, Spilka, 1965).

With almost dramatic suddenness, at about the fourth grade, Indian students achieve and even excel standardized norms (Aberdeen Area Office, 1965). This "golden age" of achievement often lasts until the seventh grade (Bollinger, 1961; Holy Rosary Mission, 1964).

At about the seventh and eighth grades, there begins a steady decline in achievement. Very notably this continues to the twelfth grade (Artichoker, 1957; Spilka and Bryde, 1965) and is accompanied by a sixty per cent dropout rate (Thompson, 1963). In addition, by the twelfth grade, most Indian groups are as far as two years behind in achievement.

I. BASIC ASSUMPTIONS

1) It can be assumed that there is an ascertainable cause of the observed breakdown in achievement.

2) It may also be assumed that causes are other than strictly intellectual, since average I.Q.'s are present at the beginning of the educative process, as indicated above, and achievement comparable with White children was exhibited in the middle grades.

3) It can further be asserted that the causes are not the ordinary adolescent conflicts because White students of the same ages do not demonstrate similar declines in achievement.

4) It can also be claimed that emotional and personality factors may hinder the school performance of the Indian

students. As Thompson (1952) writes:

> Conflicts of values may occur in many other areas of the child's life: between parents and teachers, between parents and children's peers, between teachers and church officials, and between many other combinations of adults and children. When conflicts of this type appear in the child's life, they have a deleterious effect upon his mental hygiene. They are likely to create emotional tension and lead to temporary, or permanent, unhappiness. Such conflicts may also produce erratic child behavior, as the child switches willy-nilly from one set of values to another as guides for his behavior (p. 555).

It is hypothesized, therefore, that the impact of the Sioux-White value conflicts, occurring primarily during the period of adolescence, creates in the Sioux student adjustmental and personality deviations which, in turn, hamper achievement. It is the specific purpose of this study to identify possible areas of personality disturbances which hinder full performance.

II. HYPOTHESES

I. In comparing White and Sioux Indian children, A) significant differences will exist between the Indian children and test norms, in favor of the Indian students, up to the seventh grade exclusive in academic achievement; B) At the seventh and eighth grades, a trend will be noted for the achievement scores of the Indian students to become significantly less than those of the White students;[2] C) The decline in Sioux student achievement will continue in such a way that the White students will score at each grade level significantly higher than the Sioux students in achievement. Rationale: Comparison of White and Indian students primarily other than the Sioux, in many areas of the country, have consistently demonstrated White and Indian equivalence in achievement up to a certain grade. In some studies (Kayser, 1963), equivalence is maintained to the third grade, while other research (Witherspoon, 1962) has revealed that Indian decrements in achievement begin at the fifth and sixth grade levels. Cursory checking of Pine Ridge Sioux students in several schools suggests that Sioux decrements begin later, namely at about the seventh grade level.

II. At the age of adolescence, there will be evidence of severe personality deviations and emotional problems on the part of the Sioux Indian students relative to the White students of the same age. Rationale: At the age of adolescence, "role diffusion" (Erikson, 1950) and an emerging tendency to alienation (Keniston, 1960; Spilka and Bryde, 1965) may possibly result in loss of identity, as well as motivational deficiency, causing a drop in achievement. Such observations have been widely noted elsewhere (Lynd, 1961).

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[2] This phenomenon whereby the average achievement scores of Indian children relative to White children have been equivalent or higher and now become lower has been colloquially referred to as the "cross-over phenomenon."

III. These deviations will correlate directly with the degree of Indian "blood" of each student. Rationale: Previous studies of Indian intelligence and achievement (Bryde, Elkind, Van Doornick, Spilka, 1965; Ross, 1962; Hanson, 1937; Hunter and Sommermier, 1922) have shown that the more White "blood" the Indian students had, the higher they achieved. Furthermore, full blood Indians are more rural dwelling than mixed "bloods" (Bryde, Elkind, Van Doornick, Spilka, 1965; Coombs, Kron, Collister, 1958). The opposite, then, may be assumed: the more Indian blood a student has, the lower he will score in achievement and poorer he will appear on personality tests.

IV. The individual personality cores of the school dropouts who are Indian will reveal evidences of poorer adaptation than the Indian students who remain in school. Rationale: One ordinarily does not drop out of school if he is succeeding and is adjusted; hence, a dropout may be presumed to be having problems with which he is unable to cope in the school environment.

CHAPTER IV

METHOD

Subjects. This study was restricted to all of the eighth grade Oglala Sioux Indian students from the seven federal grade schools and one mission school on the Pine Ridge Reservation in South Dakota. These numbered 164. All of the ninth grade Oglala Sioux Indian students from the two high schools (one federal, one private) on the Pine Ridge Reservation were also included. These were 159 in number. In addition, 76 White eighth grade students and 126 White ninth grade students from public schools in the small towns closest to the reservation provided control groups. Furthermore, for profile comparisons with Indian eighth and ninth graders and with Indian dropouts, 92 Sioux Indian senior high school students were tested. These were drawn from the federal and mission high schools on the Pine Ridge Reservation, as well as from the federal and mission high schools on the Rosebud Reservation, which is contiguous to the Pine Ridge Reservation. In order to test hypothesis III, the Indian students were also divided into four groups depending upon their degree of Indian blood: one-quarter blood, one-half blood, three-quarter blood and full blood. Degrees of blood were ascertained from the official records in the Probate and Census Office in the agency towns of Pine Ridge, S.D. and Rosebud, S.D. Comparisons by age were also made within the Indian groups and within the White groups.

Tests and apparatus. The main testing instrument was the Minnesota Multiphasic Personality Inventory (MMPI). The literature on the MMPI is voluminous. Benton, writing the Third Mental Measurements Year Book (Buros, 1949), after referring to publications of the Minnesota group concerning the proper use of the Inventory, noted:

> As a detailed self evaluation by the patient, the inventory has considerable potential usefulness both as a research instrument and a practical clinical aid. Continued experience with it suggests many values to the soundly trained clinical psychologist and appears to yield data of real clinical import (p. 60).

H. J. Eysenck, writing in the same volume, states:

> a) The standardization has been done very carefully and conscientiously.
>
> b) The statistical work is of high quality and leaves little to be desired...of its kind it is probably the best inventory in existence (ibid., p. 60).

Rotter, another of the reviewer's of the MMPI in Buros' work writes:

> Test-retest reliabilities for the separate scales are reported as ranging from .71 to .83. Validity measures are for single scales and are usually in terms of overlap between patients of a given nosology, unselected patients and normals. Satisfactory differentiation is reported in most instances (p. 61).

Buros concludes by citing the Journal of the American Medical Association:

> This personality schedule in the hands of properly trained psychiatrists and psychologists would appear to be of considerable usefulness where large numbers of persons must come under observation, as in industry (p. 61).

Albert Ellis, writing in the fifth and latest Mental Measurement Year Book (1959) concluded:

> ...it can confidently be stated that in the whole history of modern psychology, there has been no other personality inventory on which so much theoretical and practical work has been done.... This time and effort has borne sufficient fruit to make it now appear that the instrument is quite useful for many kinds of group discrimination (85, 86).

In the same volume, W. T. Norman also concludes:

> This instrument is probably the most carefully constructed and thoroughly researched inventory available for personality assessment. It is likely to be an increasingly useful clinical tool (p. 87).

Hathaway and Meehl (1951) cite over 250 publications supporting the MMPI, and Dahlstrom and Welsh (1962), after presenting a bibliography of over 1000 articles in similar support, give test-retest reliability estimates on basic scales from twenty-two separate studies over periods ranging from one day to four years. These indicate quite satisfactory reliability (p. 472). High internal consistency estimates are also reported in five different studies (p. 474).

Hathaway and Monachesi (1963), using the test "as an established tool," (p. 4) measured over 15,000 ninth grade students from 108 different schools representing virtually every variety of economic and social level. Their findings were correlated with a wealth of other data, police records, teacher evaluations, school achievement and other factors to produce a large scale picture of adolescent personality and behavior. It may be concluded that the MMPI has been extensively employed and is generally well received.

Procedure. Since the investigator is a clergyman, he himself did not administer the tests to the Indian or the White students, lest a socially desirable response set be generated by his presence. A layman, trained in the administration of the MMPI, gave the tests, after which the writer scored them.

Means and standard deviations were computed on all the scales for comparisons among the various groups as stated in the hypotheses. For significance between groups, t tests were utilized. For comparison among groups (eighth, ninth and twelfth grade Indians; Indians divided by degrees of blood) the analysis of variance was used, followed by Scheffe tests to locate differences.

CHAPTER V

RESULTS AND DISCUSSION

I. INTRODUCTION

After the MMPI protocols of the 638 subjects were scored and achievement data for the eighth grade Indian group had been gathered from the various schools, the scores of all the variables were punched on IBM cards, the data were submitted to a Burroughs B5500 computer for analysis. Although the central focus of the study was the Indian and White eighth grade groups, as broad comparisons as possible between the total Indian and White groups and within the several Indian groups were made.

Means and standard deviations were computed for each group. When comparisons were made between two groups, t tests were computed for each variable on which the two groups were studied. Since the Indian group was divided by degrees of blood, as well as by grades, the analysis of variance was utilized to determine the significance of observed differences among the means. Where significant F ratios appeared among these groups, the Scheffe test was used to determine the location of the obtained significant differences.

In addition to the White and Indian eighth grade group, further demographic variables studied included: group membership (Indian and White) sex, school status (dropout or continuing), school grade, degree of Indian blood.

II. ANALYSIS OF ACHIEVEMENT DATA

Achievement variables were available only for the Indian eighth grade group. School records were searched and California Achievement scores for this group were obtained for each year extending back to the fourth grade. Achievement comparisons were made between Indian and White students, Indian boys and girls, among Indian blood groups, and Indian dropouts with Indian pupils who remained in school. The personality variables studied were the conventional fourteen scales of the MMPI, plus an additional fourteen sub-scales compiled and described by Dana (1956). Each of these twenty-eight measures was compared relative to the above-described groups.

Indian versus White students

It was hypothesized that Indian achievement, after favorable comparison with White achievement in the middle grades, would show a sharp decline at the eighth grade level (hypothesis I). Figure 1 shows the achievement levels of the eight grade Indian subjects from the time they were in the fourth grade. It will be noted that their achievement in the fourth grade was seven months above the national norm on the California Achievement test; five months above the

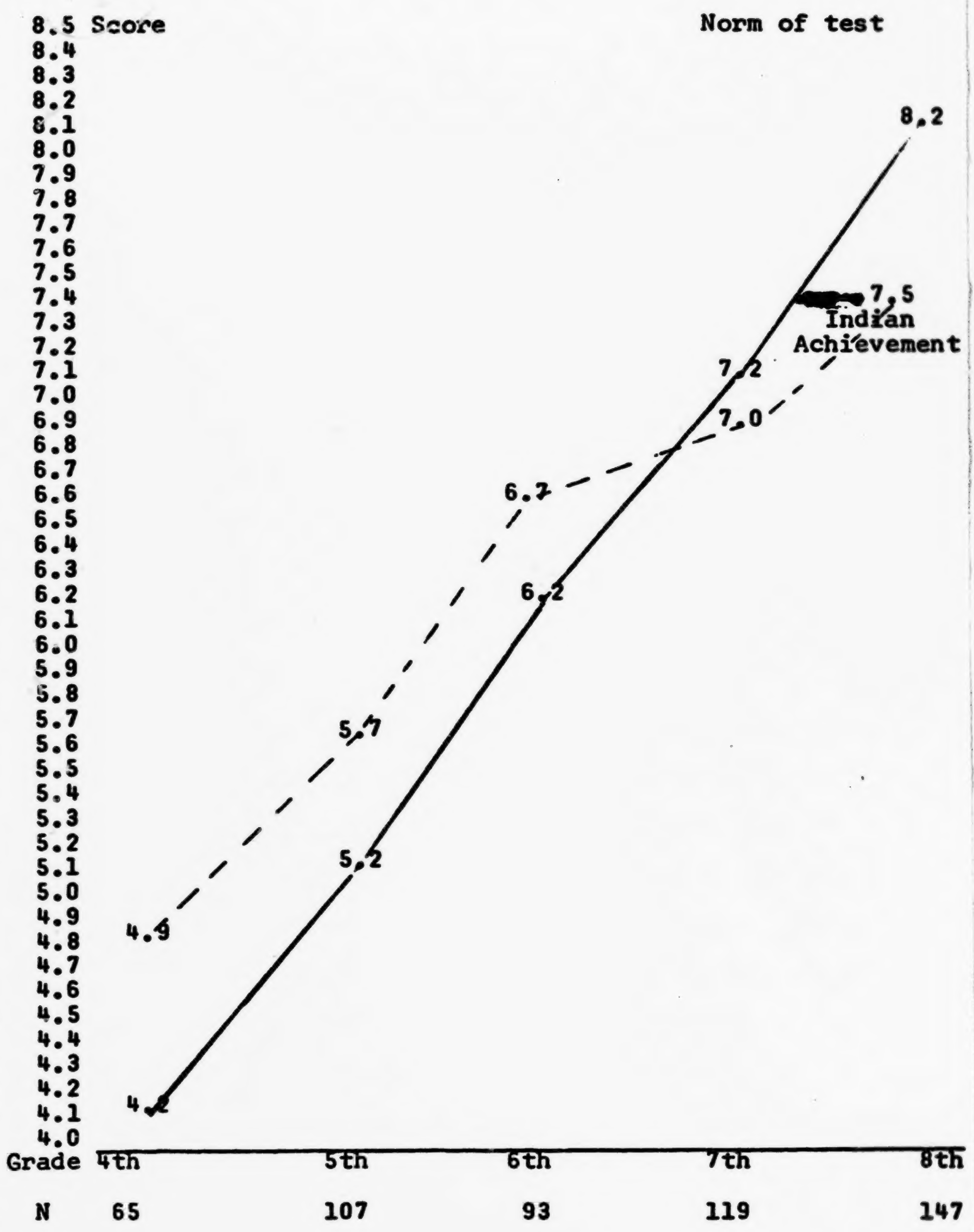

FIGURE 1
CALIFORNIA ACHIEVEMENT TEST SCORES OF INDIAN EIGHTH GRADE STUDENTS

TABLE 1

COMPARISON OF EIGHTH GRADE INDIANS' ACHIEVEMENT WITH TEST NORMS OF THE CALIFORNIA ACHIEVEMENT TESTS

	Indians			Test Norms			
Grade	Mn.	S.D.	N.	Mn.	S.D.	N.	t
4th	4.9	.7	65	4.2	.9	200	6.30**
5th	5.7	.8	107	5.2	1.2	"	2.63**
6th	6.7	.9	93	6.2	1.3	"	3.84**
7th	7.0	1.0	119	7.2	1.5	"	1.42
8th	7.5	1.1	147	8.2	1.7	"	4.66**

**Designates significance at .01 level

norm in the fifth and sixth grades; two months behind in norm in the seventh grade and six months behind the norm in the eighth grade. From Table 2, it can be seen that, except for the seventh grade, all these differences were significant beyond the .01 level. The sample sizes listed in Figure 1 were available for achievement comparisons. Only those noted in Table 9 were available for MMPI analysis.

Although grades for achievement comparison in the White eighth grade group were not obtainable, reducing achievement scores for the Indian eighth grade group in comparison to the White eighth grade group may be hypothesized for two reasons: 1) all other White-Indian studies, already cited, have shown this trend; 2) the sharp decline at the eighth grade for the Indian pupils relative to the national norms of the California Achievement test. Although the Pine Ridge Sioux children apparently begin their decline at the seventh grade level, it was noted on page 49, that the total Sioux grade school population of 3,172 children in the thirty-eight federal Indian schools of North and South Dakota showed a decline beginning at the sixth grade. Thus, the Pine Ridge children do slightly better in comparison to the total Sioux grade school population. In the light of these findings, it would appear that hypothesis I finds general support.

TABLE 2

COMPARISON OF ALL INDIAN BOYS AND ALL INDIAN GIRLS

	Indian Boys N: 226		Indian Girls N: 189		
Variable	Mn.	S.D.	Mn.	S.D.	t
1. L	4.14	2.48	3.37	2.74	N.S.
2. F	12.90	6.78	12.58	6.99	N.S.
3. K	10.81	4.44	10.29	4.28	1.60 N.S.
4. Hs	15.67	4.84	16.45	4.95	1.61 N.S.
5. D	22.09	5.05	23.60	5.16	2.99**
6. Hy	19.85	4.83	21.68	5.02	3.77**
7. Pd	25.26	5.80	25.59	4.74	N.S.
8. Mf(m)	22.41	4.46	0.00	0.00	
9. Mf(f)	0.00	0.00	30.80	4.64	
10. Pa	13.03	6.61	12.60	4.84	N.S.
11. Pt	23.41	6.89	25.83	8.68	N.S.
12. Sc	28.60	10.21	29.50	12.38	N.S.
13. Ma	23.42	4.90	22.49	5.07	1.86 N.S.
14. Si	33.10	6.92	35.04	6.50	2.91**
15. A	21.28	7.41	22.67	7.95	1.82*
16. R	14.35	4.74	15.47	3.96	2.55*
17. Ac	14.86	4.07	14.64	3.73	N.S.

TABLE 2 (continued)

	Indian Boys N: 226			Indian Girls N: 189			
Variable	Mn.		S.D.	Mn.		S.D.	t
18. Es	37.19		6.03	34.55		5.43	4.62**
19. Dy	28.24		7.47	31.08		8.31	3.66**
20. D1	11.42		4.11	12.63		4.09	2.98**
21. D4	5.46		3.37	6.11		3.92	1.70 N.S.
22. Hy2	4.21		3.17	4.20		3.43	N.S.
23. Pd2	5.10		2.54	4.79		3.83	N.S.
24. Pd4a	7.84		2.83	8.58		3.12	1.31 N.S.
25. Pd4b	7.19		2.70	7.75		2.95	1.99*
26. Pa1	5.21		3.20	5.54		3.36	1.03 N.S.
27. Sc1a	7.58		3.42	7.77		3.58	N.S.
28. Sc1b	3.12		2.02	3.42		2.24	1.42 N.S.
29. Drops	0.88		0.33	0.84		0.37	1.15 N.S.
30. 4th	4.7	N:31	.5	5.5	N:15	.9	N.S.
31. 5th	5.8	N:48	.7	5.9	N:28	.0	1.57 N.S.
32. 6th	6.6	N:55	.8	6.7	N:32	.9	N.S.
33. 7th	7.0	N:54	.8	7.6	N:33	1.1	1.18 N.S.
34. 8th	7.2	N:68	.9	7.9	N:46	1.1	N.S.

*Designates significance at .05 level

**Designates significance at .01 level

Indian Boys Versus Indian Girls

In comparing the achievement of Indian eighth grade boys with Indian eighth grade girls from the fourth grade to the eighth grade in Table 2, one notes that for each year the girls achieve slightly higher, but none of the differences are significant. The girls in general reveal larger standard deviations which may account for the non-significant differences between the Indian boys and girls. Pearson product-moment correlations between sex and achievement were computed for each year from the fourth to the eighth grade but none attained significance. It may therefore be concluded that Indian boys and girls reveal no significant differences in their achievement on the California tests.

Indian Students by Degree of Indian Blood

The total Indian eighth grade group was divided into four degree-of-Indian-blood groups: one-quarter blood, one-half blood, three-quarter blood and full blood. Means and standard deviations were compared via a randomized group analysis of variance, which was followed by the Scheffe test when significant differences among the groups was obtained. Differences in means and standard deviations among the four groups were so small that no significant differences in achievement were found among any of the groups, as can be seen from Tables 3 and 4.

TABLE 3

ANALYSIS OF INDIAN STUDENTS BY "BLOOD" GROUPS

Var.	Quarter-blood N: 54 Mn.	Quarter-blood N: 54 S.D.	Half-blood N: 104 Mn.	Half-blood N: 104 S.D.	Three-quarter blood N: 51 Mn.	Three-quarter blood N: 51 S.D.	Full blood N: 206 Mn.	Full blood N: 206 S.D.	F
1. L	3.08	1.90	3.50	2.35	3.82	2.32	5.03	2.71	5.46**
2. F	9.75	5.59	11.98	7.56	12.96	6.71	13.88	6.59	5.83**
3. K	11.26	4.47	10.62	4.75	9.59	3.69	10.61	4.27	1.30 N.S.
4. Hs	15.25	4.50	15.12	4.63	16.02	4.63	16.70	5.09	2.96*
5. D	21.85	4.67	21.80	5.18	23.53	6.04	23.34	4.92	7.59**
6. Hy	21.23	4.70	20.41	4.82	20.31	4.97	20.76	5.17	4.15**
7. Pd	25.47	4.29	25.34	4.80	26.39	8.82	25.20	4.65	N.S.
8. Mf(m)	14.32	11.54	12.55	11.19	11.49	11.16	11.72	11.92	N.S.
9. Mf(f)	11.77	15.88	12.75	15.44	14.62	15.72	15.19	15.47	1.00 N.S.
10. Pa	11.40	3.87	13.00	4.64	11.80	4.58	13.37	6.96	2.19 N.S.
11. Pt	21.83	7.45	24.41	7.82	26.24	7.94	24.82	7.78	3.02*
12. Sc	25.77	9.89	28.36	12.34	30.86	12.18	29.73	10.59	2.33 N.S.

TABLE 3 (continued)

Var.	Quarter-blood N: 54 Mn.	Quarter-blood N: 54 S.D.	Half-blood N: 104 Mn.	Half-blood N: 104 S.D.	Three-quarter blood N: 51 Mn.	Three-quarter blood N: 51 S.D.	Full blood N: 206 Mn.	Full blood N: 206 S.D.	F
13. Ma	22.19	4.57	23.16	5.02	24.22	4.64	22.82	5.13	1.60 N.S.
14. Si	33.00	7.15	33.00	6.77	33.33	8.02	34.86	6.27	2.41 N.S.
15. A	20.24	7.82	21.61	8.68	23.78	7.93	22.05	6.91	2.14 N.S.
16. R	15.66	4.09	14.04	4.35	14.35	4.39	15.21	4.51	N.S.
17. Ac	13.81	4.12	14.68	3.87	15.67	3.24	14.83	4.00	1.97 N.S.
18. Es	38.45	5.42	37.50	6.13	33.57	5.79	35.22	5.53	9.93**
19. Dy	27.74	7.55	29.33	8.99	31.20	8.23	29.65	7.38	1.68 N.S.
20. Dl	10.89	4.33	11.49	4.20	12.61	4.86	12.33	3.79	2.62*
21. D4	4.89	2.65	5.13	2.27	6.80	5.73	6.03	3.68	3.85**
22. Hy2	5.11	3.60	4.48	3.40	3.94	4.70	3.87	2.59	2.41 N.S.
23. Pd2	5.09	3.21	5.33	3.44	4.53	1.65	4.85	3.33	N.S.
24. Pd4a	6.86	3.03	8.24	3.30	8.25	3.05	8.46	2.70	4.11**
25. Pd4b	6.58	2.79	7.18	3.05	7.80	2.79	7.70	2.68	2.80*

TABLE 3 (continued)

Var.	Quarter-blood N: 54 Mn.	S.D.	Half-blood N: 104 Mn.	S.D.	Three-quarter blood N: 51 Mn.	S.D.	Full blood N: 206 Mn.	S.D.	F
26. Pal	4.43	3.81	5.46	3.59	5.24	3.00	5.59	2.98	1.81 N.S.
27. Scla	6.62	3.07	7.60	3.83	7.82	3.83	7.93	3.28	2.03 N.S.
28. Sclb	2.72	1.85	3.05	2.05	3.18	2.24	3.53	2.16	2.72*
29. Dropouts	0.94	0.23	0.95	0.21	0.82	0.38	0.80	0.40	6.45**
30. 4th	4.4 N:4	.6	5.1 N:7	.7	4.8 N:5	.4	5.0 N:30	.8	1.90 N.S.
31. 5th	5.8 N:5	.4	5.9 N:9	.4	6.0 N:7	.4	5.8 N:55	.9	6.39**
32. 6th	6.9 N:6	1.1	6.8 N:13	.8	7.2 N:7	.9	6.5 N:61	.8	5.43**
33. 7th	7.4 N:5	1.2	7.6 N:12	.6	7.2 N:10	.0	7.1 N:60	1.0	5.52**
34. 8th	7.8 N:12	1.5	7.5 N:17	.8	7.9 N:14	1.0	7.4 N:71	1.0	3.65*

TABLE 4

SCHEFFE' TEST FOR DIFFERENCES AMONG "BLOOD" GROUPS

Variable	MEANS Quarter-blood	Half-blood	Three-quarter-blood	Full blood	SIGNIFICANT GAP (No entry indicates no significance at either level) .10	.05
1. L	3.08	3.50	3.82	5.03		.80
2. F	9.75	11.98	12.96	13.88		1.06
3. K	11.26	10.62	9.59	10.61		
4. Hs	15.25	15.12	16.02	16.70	1.49	
5. D	21.85	21.80	23.53	23.34		1.54
6. Hy	21.23	20.40	20.31	20.76		
7. Pd	25.47	25.34	26.39	25.20		
8. Mf(m)	14.32	12.55	11.49	11.72		
9. Mf(f)	11.77	12.75	14.62	15.19		
10. Pa	11.40	13.00	11.80	13.37		
11. Pt	21.83	24.41	26.24	24.82	3.82	

TABLE 4 (continued)

Variable	MEANS				SIGNIFICANT GAP (No entry indicates no significance at either level)	
	Quarter-blood	Half-blood	Three-quarter-blood	Full blood	.10	.05
12. Sc	25.77	28.36	30.86	29.73		
13. Ma	22.19	23.16	24.22	22.82		
14. Si	33.00	33.00	33.33	34.86		
15. A	20.24	21.61	23.73	22.05		
16. R	15.66	14.04	14.35	15.21		
17. Ac	13.81	14.68	15.67	14.83		
18. Es	38.45	37.50	33.57	35.22		3.14
19. Dy	27.74	29.33	31.20	29.65		
20. Dl	10.89	11.49	12.61	12.33		
21. D4	4.89	5.13	6.80	6.03	1.76	
22. Hy2	5.11	4.48	3.94	3.87		
23. Pd2	5.09	5.33	4.53	4.85		
24. Pd4a	6.86	8.24	8.25	8.46		1.26

TABLE 4 (continued)

Variable	MEANS Quarter-blood	Half-blood	Three-quarter-blood	Full blood	SIGNIFICANT GAP (No entry indicates no significance at either level) .10	.05
25. Pd4b	6.58	7.18	7.80	7.70	1.07	
26. Pal	4.43	5.46	5.24	5.59		
27. Scla	6.62	7.60	7.82	7.93		
28. Sclb	2.72	3.05	3.18	3.53	.80	
29. Drops	0.94	0.95	0.82	0.80	.002	
30. 4th	4.4	5.1	4.8	5.0		
31. 5th	5.8	5.9	6.0	5.8		
32. 6th	6.9	6.8	7.2	6.5		
33. 7th	7.4	7.6	7.2	7.1		
34. 8th	7.8	7.5	7.9	7.4		

Pearson product-moment correlations were computed between degree of Indian blood and achievement for each year from the fourth grade to the eighth grade. No significant correlation coefficients were found among the four blood groups in any of the years from the fourth to the eighth grade. The sample sizes in these analyses tended to be quite small.

Dropouts

From the time when the psychological tests were given to Indian subjects to the time when the data were ready for computer analysis, almost a year and a half elapsed. During this time, 59 of the Indian students originally tested dropped out of school. This provided the expected opportunity of comparing the dropouts on the achievement and personality variables with the Indian students who stayed in school.

Table 5 shows the mean achievement scores for the dropouts and the continuing Indian students from the fourth grade through the eighth grade. None of the differences are significant, probably due to the small samples of dropouts in the individual grades. It must be noted that the total of 59 dropouts included Indian students from the over-all sample of eighth, ninth and twelfth grade Indians. Achievement scores from the fourth to eighth grade were however

TABLE 5

COMPARISON OF INDIAN DROPOUTS AND ALL INDIANS (MINUS DROPOUTS)

	DROPOUTS N: 59		ALL INDIANS N: 356		
Variable	Mn.	S.D.	Mn.	S.D.	t
1. L	4.73	2.59	4.16	2.60	1.58 N.S.
2. F	14.47	6.13	12.47	6.96	2.07*
3. K	9.61	3.74	10.73	4.45	1.82 N.S.
4. Hs	16.76	4.49	15.90	4.96	1.24 N.S.
5. D	24.42	5.22	22.51	5.09	2.65**
6. Hy	20.71	4.94	20.67	5.01	N.S.
7. Pd	25.81	4.42	25.35	5.48	1.58 N.S.
8. Mf(m)	11.25	12.17	12.36	11.54	N.S.
9. Mf(f)	16.68	15.78	13.71	15.57	1.34 N.S.
10. Pa	14.63	10.77	12.54	4.51	2.54*
11. Pt	26.46	9.75	24.19	7.44	2.05*
12. Sc	31.98	11.91	28.52	11.07	2.19*
13. Ma	23.56	5.89	22.90	4.83	N.S.
14. Si	36.63	5.63	33.54	6.88	3.26**
15. A	23.75	7.13	21.61	7.74	1.97*
16. R	14.75	3.96	14.88	4.51	N.S.
17. Ac	15.83	5.01	14.58	3.68	2.26*

TABLE 5 (continued)

	DROPOUTS N: 59			ALL INDIANS N: 356			
Variable	Mn.		S.D.	Mn.		S.D.	t
18. Es	34.92		5.59	36.16		5.95	1.48 N.S.
19. Dy	30.85		8.53	29.32		7.88	1.33 N.S.
20. Dl	13.15		4.26	11.78		4.09	2.37*
21. D4	6.42		2.42	5.64		3.80	1.51 N.S.
22. Hy2	3.58		2.92	4.31		3.34	1.58 N.S.
23. Pd2	4.76		1.70	4.99		3.38	N.S.
24. Pd4a	8.71		2.79	8.09		3.01	1.48 N.S.
25. Pd4b	8.37		2.98	7.29		2.77	2.74**
26. Pal	5.93		3.19	5.27		3.29	1.44 N.S.
27. Scla	8.34		3.62	7.55		3.46	1.60 N.S.
28. Sclb	4.03		2.25	3.13		2.08	3.04**
29. 4th	4.3	N:5	1.7	4.9	N:65	.7	.7 N.S.
30. 5th	6.0	N:6	.6	5.7	N:107	.8	.08 N.S.
31. 6th	6.8	N:8	.7	6.7	N:93	.9	.8 N.S.
32. 7th	7.4	N:10	.7	7.0	N:119	1.0	.03 N.S.
33. 8th	7.5	N:13	.7	7.5	N:147	1.1	N.S.

*Designates significance at .05 level

**Designates significance at .01 level

obtainable only for the eighth grade Indian dropouts who were only 14 in number. Of this small number, only a few had achievement scores recorded for each year in school; most had apparently missed one to three of the annual testing days. Due to the small N of the dropout achievement sample, it is difficult to draw any meaningful conclusions about the relative school performance of the dropouts and Indian students who continued in school.

III. ANALYSIS OF PERSONALITY DATA

Whites Versus Indians

Of the 672 possible comparisons across the various groups on the 28 personality variables, the discussion in the following pages will be selectively directed toward those which are especially meaningful in the light of previous research and/or theory relative to investigations of this nature. A description of the MMPI subscales may be found in Appendix 1.

Comparison of all White students with all Indian students. From Table 6, it can be seen that the total Indian sample numbered 415 students. The total number of White students was 223. Of the 28 comparisons reported in Table 6, 26 obtained significance at the .01 level. These included the following MMPI scales: L, F, Hs, D, Hy, Pd, Pa, Pt, Sc, Ma, Si, A, Es, Dy, D4, Hy2, Pd2, Pd4a, Pd4b,

TABLE 6

COMPARISON OF ALL INDIAN STUDENTS AND ALL WHITE STUDENTS

	INDIAN N: 415		WHITE N: 223		
Variable	Mn.	S.D.	Mn.	S.D.	t
1. L	4.24	2.61	3.27	2.08	4.81**
2. F	12.75	6.88	7.89	5.63	9.04**
3. K	10.57	4.37	11.78	4.37	1.22 N.S.
4. Hs	16.02	4.90	12.72	3.95	8.65**
5. D	22.78	5.16	19.12	4.62	7.96**
6. Hy	20.68	5.00	19.42	4.56	3.10**
7. Pd	25.41	5.34	22.98	5.97	5.25**
8. Mf(m)	12.20	11.63	11.69	11.79	1.01 N.S.
9. Mf(f)	14.16	15.63	16.27	17.12	1.59 N.S.
10. Pa	12.84	5.87	10.74	4.15	6.89**
11. Pt	24.51	7.85	18.77	8.42	8.58**
12. Sc	29.01	11.26	20.27	10.58	9.54**
13. Ma	22.99	4.99	20.62	5.14	7.43**
14. Si	33.99	6.80	29.91	8.37	6.64**
15. A	21.91	7.69	16.99	8.98	5.98**
16. R	14.86	4.44	14.65	4.19	N.S.
17. Ac	14.76	3.92	13.19	3.84	N.S.

TABLE 6 (continued)

	INDIAN N: 415		WHITE N: 223		
Variable	Mn.	S.D.	Mn.	S.D.	t
18. Es	35.99	5.91	39.36	6.64	6.57**
19. Dy	29.53	7.99	24.92	8.96	6.66**
20. Dl	11.97	4.14	8.60	3.80	3.18**
21. D4	5.75	3.65	3.61	2.15	8.05**
22. Hy2	4.21	3.29	5.42	2.22	4.91**
23. Pd2	4.96	3.19	4.12	1.66	3.64**
24. Pd4a	8.18	2.99	6.45	2.99	6.95**
25. Pd4b	7.44	2.83	4.89	2.72	5.58**
26. Pal	5.36	3.28	3.29	2.79	8.02**
27. Scla	7.67	3.49	5.34	3.28	8.19**
28. Sclb	3.26	2.13	2.17	1.86	6.47**

*Designates significance at .05 level

**Designates significance at .01 level

Pal, Scia, Scib. Where such significance was obtained, the Indian students revealed greater personality disruption, hence poorer adjustment.

Of special note are the following: The F score for the Indian group, although considerably higher than the White group, is easily within the valid range (Hathaway and Monachesi, 1961, p. ix). High F scores are to be expected with adolescents (Hathaway and Monachesi, 1961, p. 376) and particularly with young people who feel rejected (Hathaway and Monachesi, 1953, p. 23). Since the anomic condition of Sioux adolescents has already been noted (Spilka and Bryde, 1965), a corresponding feeling of rejection may likewise be assumed (Durkin, 1964).

In this vein, one of the first characteristics of the emerging Indian personality profile that is evidenced is the pattern of rejection, anxiety, alienation and depression exhibited by the Indian students. The average Sioux student thus scored significantly higher than his White counterpart for social alienation, emotional alienation, self alienation, social isolation, anxiety and depression.

The scores of the Indian students on the Subjective Depression scale correlated .564 with social alienation scores; .604 with the emotional alienation scores; and .655 with the self alienation scores. All correlations were significant beyond the .01 level. Likewise, social isolation scores correlated as follows with the following scales: .486 with social alienation; .470 with emotional alienation; .458 with self alienation; again all attain significance beyond the .01 level.

An accompanying state of high anxiety could therefore be expected. It is therefore not surprising that the Indian students scored almost five points higher on the anxiety scale than the White students. Anxiety scores of the Indian students correlated .238 with social alienation; .403 with emotional alienation; .324 with self alienation.

Depressed, anxious, alienated from himself and others and becoming increasingly encapsulated, the Indian students showed less need for affection. It was psychologically probable, therefore, that they should show high schizophrenic (Sc) scores which are evident in Table 6. This Sc tendency correlated .649 with self alienation, .651 with feelings of external coercion, .566 with social alienation and .625 with emotional alienation. All correlations were significant beyond the .01 level.

Since he perceives the external world as constantly hostile and coercive, paranoid reactions would seem inevitable. Highly significant differences were thus noted between the Indian and White students on this scale. Although the schizophrenic and paranoid (along with the Depression and

Manic) scores of the Indian students were not high enough to establish the psychotic triad (Hathaway, 1951, p. 25), the pattern among these scales is so consistent as to hint at the presence of incipient stages.

As though feeling himself crushed under insuperable odds, the Indian student seems to try to reach out from himself by hoping for and verbalizing high achievement. Not only in this over-all comparison between all Indians and all Whites do the Indian students express higher need to achieve scores, but also in all the other White-Indian comparisons. The White students, feeling more secure and possessing higher ego strength scores, show lower need-to-achieve scores, whereas the Indian students, feeling insecure with their lower ego strength scores, express a greater need to achieve. Johnson (1963) in a study already cited, also found Indians expressing a greater need to achieve than White students.

In summary, it would appear that the Indian students show themselves significantly different from the White students in feeling depressed, rejected, alienated from themselves and others, anxious, encapsulated, withdrawn, and paranoid.

Comparison of all Indian boys and all White boys. Of the 28 comparisons reported in Table 7, two obtained significance at the .05 level of confidence and 20 at the

TABLE 7

COMPARISON OF ALL INDIAN BOYS AND ALL WHITE BOYS

	INDIAN BOYS N: 226		WHITE BOYS N: 114		
Variable	Mn.	S.D.	Mn.	S.D.	t
1. L	4.14	2.48	3.33	2.14	2.91**
2. F	12.90	6.78	8.53	6.16	3.09**
3. K	10.81	4.44	12.00	4.48	2.31*
4. Hs	15.67	4.84	12.36	4.12	6.23**
5. D	22.09	5.05	18.51	4.74	6.28**
6. Hy	19.85	4.83	18.64	4.53	2.18*
7. Pd	25.26	5.80	22.37	5.01	4.52**
8. Mf(m)	22.41	4.46	22.60	4.82	N.S.
9. Mf(f)	0.00	0.00	0.00	0.00	
10. Pa	13.03	6.61	10.80	4.26	8.13**
11. Pt	23.41	6.89	17.46	7.91	6.29**
12. Sc	28.60	10.21	20.25	10.27	2.24*
13. Ma	23.42	4.90	20.59	5.22	4.90**
14. Si	33.10	6.92	28.57	8.90	5.15**
15. A	21.28	7.41	15.64	8.60	3.25**
16. R	14.35	4.74	14.18	4.35	N.S.
17. Ac	14.86	4.07	13.11	3.92	3.77**

TABLE 7 (continued)

	INDIAN BOYS N: 226		WHITE BOYS N: 114		
Variable	Mn.	S.D.	Mn.	S.D.	t
18. Es	37.19	6.03	40.46	7.11	4.43**
19. Dy	28.24	7.47	22.74	8.59	6.07**
20. Dl	11.42	4.11	8.02	3.50	7.54**
21. D4	5.46	3.37	3.46	2.08	5.76**
22. Hy2	4.21	3.17	5.29	2.09	3.27**
23. Pd2	5.10	2.54	4.56	1.83	2.01*
24. Pd4a	7.84	2.83	6.05	2.93	1.71 N.S.
25. Pd4b	7.19	2.70	4.64	2.69	8.20**
26. Pal	5.21	3.20	3.45	2.72	5.00**
27. Scla	7.58	3.42	5.17	3.33	6.18**
28. Sclb	3.12	2.02	2.47	2.12	2.74**

*Designates significance at .05 level

**Designates significance at .01 level

.01 level. These included the following scales: L, F, K, Hs, D, Hy, Pd, Pa, Pt, Sc, Ma, Si, A, Ac, Es, Dy, D1, D4, Hy2, Pd2, Pd4a, Pd4b, Pa1, Sc1a, Sc1b. Where significant differences obtained, the Indian boys revealed the greater personality disruptions and the problems of adjustment. The pattern established by the Indian boys is fairly consistent with that established by all the Indian subjects in comparison to all the White subjects.

One notices first of all that the Indian boys score the same higher F scale scores that all Indian subjects manifested. The F score of the Indian boys is also significantly higher than that obtained by the White boys. The Indian boys, in comparison to the White boys further exhibited the pattern of rejection, anxiety, alienation and depression that was demonstrated by all the Indian Ss. In addition, they scored significantly higher than the White boys on social alienation, emotional alienation, self alienation, social isolation, anxiety and depression.

This feeling of rejection on the part of the Indian boys correlates beyond the .01 level, .779 with the schizophrenic scale, .451 with the anxiety scale, .495 with the dependency scale, .599 with subjective depression, .671 with notions of external coercion, .658 with social alienation, .602 with emotional alienation. A pattern of feeling isolated, dependent and depressed is thus quite apparent.

The scores of the Indian boys on the Subjective Depression scale correlated .470 with self alienation, .547 with social alienation, .494 with emotional alienation, and .410 with notions of external influence. These coefficients are significant beyond the .01 level. Social isolation, in turn, correlated with the following scales in like manner: .351 with self alienation; .456 with social alienation; .252 with emotional alienation.

The Indian boys also reveal the same state of high anxiety manifested by all of the Indian Ss, scoring five points higher than the White boys on this scale. Anxiety scores for the Indian boys correlated .647 with self alienation, .588 with social alienation, .424 with emotional alienation and .469 with notions of external influence.

Demonstrating relatively high anxiety and alienation from himself and others, Indian boys showed less need for affection, and a corresponding tendency to score higher on the Sc scale than the White boys. This schizophrenic tendency for the Indian boys correlated .643 with self alienation, .694 with ideas of external coercion, .838 with social alienation and .664 with emotional alienation. These coefficients are significant beyond the .01 level.

Feeling constantly threatened and coerced by the world, the Indian boys also scored significantly higher on the paranoid scale than did the White boys. As with all the

Indian subjects, the former did not score sufficiently high on the Sc and Pa scales to evidence the psychotic triad. It should however be noted again that the pattern of these scales leaves one with misgivings regarding what it might possibly signify for the future.

Scoring significantly higher than the White boys on the need-for-achievement scale, one might hypothesize that the Indian boy may possibly substitute a fantasy of achievement in an effort to escape the bind in which he feels himself. Indian boys further scored significantly lower than the White boys in ego strength. This conflict between lack of ego strength and high aspiration possibly adds to the psychic conflicts of the Indian boys.

In summary, the Indian boys as a group show themselves significantly poorer than White boys in their feelings of being rejected, depressed, dependent, alienated from themselves and others. They further exhibit more anxiety, withdrawal, and paranoid tendencies.

Comparison of all Indian girls and all White girls. Of the 28 comparisons reported in Table 8, 23 obtained significance at the .01 level of confidence and two at the .05 level. This included the following scales: F, K, Hs, D, Hy, Pd, Mf, Pa, Pt, Sc, Ma, Si, A, R, Ac, Es, Dy, D1, D4, Hy2, Pd2, Pd4a, Pd4b, Pa1, Sc1a, Sc1b.

TABLE 8

COMPARISON OF ALL INDIAN GIRLS AND ALL WHITE GIRLS

	INDIAN N: 189		WHITE N: 109		
Variable	Mn.	S.D.	Mn.	S.D.	t
1. L	3.37	2.74	3.21	2.01	1.02 N.S.
2. F	12.58	6.99	7.23	4.96	6.82**
3. K	10.29	4.28	11.54	4.26	2.42*
4. Hs	16.45	4.95	13.12	3.74	6.08**
5. D	23.60	5.16	19.73	4.43	6.53**
6. Hy	21.68	5.02	20.21	4.47	2.51*
7. Pd	25.59	4.74	23.61	6.80	2.93**
8. Mf(m)	0.00	0.00	0.00	0.00	
9. Mf(f)	30.80	4.64	33.07	6.17	3.58**
10. Pa	12.60	4.84	10.64	4.04	3.55**
11. Pt	25.83	8.68	20.06	8.72	5.49**
12. Sc	29.50	12.38	20.26	10.93	6.43**
13. Ma	22.49	5.07	20.63	5.07	2.59**
14. Si	35.04	6.50	31.22	7.53	4.58**
15. A	22.67	7.95	18.28	9.12	4.33**
16. R	15.47	3.96	15.17	3.96	1.46 N.S.
17. Ac	14.64	3.73	13.27	3.78	3.03**

TABLE 8 (continued)

	INDIAN N: 189		WHITE N: 109		
Variable	Mn.	S.D.	Mn.	S.D.	t
18. Es	34.55	5.43	38.30	5.86	5.56**
19. Dy	31.08	8.31	27.07	8.75	3.92**
20. Dl	12.63	4.09	9.18	4.00	7.03**
21. D4	6.11	3.92	3.74	2.22	5.76**
22. Hy2	4.20	3.43	5.50	2.31	3.44**
23. Pd2	4.79	3.83	3.68	1.33	2.91**
24. Pd4a	8.58	3.12	6.85	3.01	4.65**
25. Pd4b	7.75	2.95	5.13	2.73	7.15**
26. Pal	5.54	3.36	3.12	2.85	3.86**
27. Scla	7.77	3.58	5.50	2.23	5.43**
28. Sclb	3.42	2.24	1.84	1.49	3.85**

*Designates significance at .05 level

**Designates significance at .01 level

One notices again the high average F score recorded by the Indian girls. Although it is within the valid range, it is over five points higher than the score recorded by the White girls and re-enforces the inferred general pattern of feelings of rejection among the Indian groups.

For the Indian girls, the relatively higher Pd, Mf, and Ma scores (along with Pa) suggests the beginnings of the behavior problem triad, which indicates serious conflict with society. The neurotic triad (Hs, D, Hy) is missing, but the faint beginnings of the psychotic triad (Sc, Pa, along with D and Ma) seem to be present.

The Indian girls exhibited the same high patterns of alienation and withdrawal shown by the Indian boys. They thus scored significantly higher than the White girls on social alienation, emotional alienation, self alienation, anxiety, depression and schizophrenia.

The scores of the Indian girls for Subjective Depression correlated .633 with self alienation, .533 with ideas of external coercion, .574 with social alienation and .623 with emotional alienation. All these correlations were significant beyond the .01 level. Also at the .01 level, Schizophrenia correlated as follows with the following scales: .665 with self alienation, .766 with ideas of external coercion .822 with social alienation, and .746 with emotional alienation.

Just as the total Indian group shows considerably higher anxiety than the total White group, so the Indian girls scored significantly higher on anxiety than the White girls. These high anxiety scores of the Indian girls correlated .651 with self alienation, .633 with ideas of external coercion, .653 with social alienation and .534 with emotional alienation. All correlations were significant beyond the .01 level.

The Indian girls also revealed less ego strength than the White girls, yet scored significantly higher than the White girls on the need-to-achieve, a phenomenon already adverted to. The latter, however, exhibited more need for affection than the Indian girls.

In summary, the Indian girls, in comparison to the White girls showed themselves to be significantly more depressed, alienated from themselves and others, withdrawn and to possess less need for affection. Evidences of feelings of rejection, paranoid coloring and anxiety are also present.

Comparison of Indian and White eighth grade. It will be recalled that the central focus of the study is the adolescent Indian at the eighth grade level. It was hypothesized that the cultural shock would be greatest at this age, resulting in declining achievement and higher and less desirable MMPI scores than the White eighth grade students.

In Figure 1, the suddenly declining achievement scores of the eighth grade Indian students were noted. We now turn to the comparison of the personality variables between the Indian and White eighth grade groups.

Of the 28 comparisons reported in Table 9, four obtained significance at the .05 level of confidence, and 20 at the .01 level. These included the following scales: L, F, Hs, D, Hy, Pd, Pa, Pt, Sc, Ma, Si, A, R, Ac, Es, Dy, Kl, D4, Hy2, Pd2, Pd4a, Pd4b, Pal, Scia and Scib. Where such significance was obtained, the Indian students revealed greater personality disruption and problems of adjustment.

A glance at Tables 6, 7 and 8 will show that, with the exception of the L and K scales, the Indian eighth graders scored higher on all the scales than any of the other Indian groups studied to date. Particularly notable is the high F score. Although within the valid range, it would seem to indicate particularly deep feelings of rejection.

Along with the high F score, also noteworthy are unusually high scores indicating depression, hypochondriasis, ideas of external influence, paranoia, schizophrenia and alienation.

This feeling of rejection on the part of the eighth grade Indian students correlated .531 with self alienation, .652 with ideas of external influence, .642 with social alienation, and .571 with emotional alienation. All

TABLE 9

COMPARISON OF INDIAN AND WHITE STUDENTS FOR THE EIGHTH GRADE

	Indian N: 164		White N: 76		
Variable	Mn.	S.D.	Mn.	S.D.	t
1. L	4.54	2.73	3.79	2.10	2.18*
2. F	14.61	6.53	9.80	6.04	5.38**
3. K	10.51	4.34	11.27	4.40	N.S.
4. Hs	17.63	4.91	13.32	3.82	6.70**
5. D	23.85	4.99	19.60	4.82	9.72**
6. Hy	21.34	5.17	19.83	4.37	2.18*
7. Pd	26.32	4.43	23.24	5.38	4.63**
8. Mf(m)	12.90	11.66	10.09	12.36	1.68 N.S.
9. Mf(f)	13.48	15.88	19.23	16.90	2.57*
10. Pa	14.09	4.77	11.11	4.58	4.51**
11. Pt	25.30	7.23	19.41	8.27	4.93**
12. Sc	31.81	10.82	22.77	11.23	5.99**
13. Ma	23.74	4.99	21.09	6.01	3.55**
14. Si	34.43	6.45	30.77	7.99	3.75**
15. A	22.20	7.38	17.49	8.80	4.27**
16. R	15.52	4.44	15.02	4.22	N.S.
17. Ac	15.09	3.75	12.80	3.91	4.30**

TABLE 9 (continued)

Variable	Indian N: 164 Mn.	S.D.	White N: 76 Mn.	S.D.	t
18. Es	34.90	5.61	36.93	7.36	2.34*
19. Dy	30.38	8.05	25.65	9.35	3.98**
20. Dl	12.77	3.71	9.24	3.62	6.85**
21. D4	6.46	4.85	3.88	2.18	4.38**
22. Hy2	4.32	4.48	5.07	2.11	1.36 N.S.
23. Pd2	5.55	3.96	3.99	1.74	3.26**
24. Pd4a	8.57	2.97	6.67	3.05	4.57**
25. Pd4b	7.64	2.80	5.16	2.71	6.39**
26. Pal	6.29	3.51	3.87	3.03	5.13**
27. Scla	8.55	3.40	6.20	3.49	4.91**
28. Sclb	3.59	2.09	2.37	2.10	4.13**

*Designates significance at .05 level

**Designates significance at .01 level

correlations were significant beyond the .01 level. Likewise, at the .01 level, subjective depression correlated .567 with self alienation, .436 with ideas of external influence, .551 with social alienation and .472 with emotional alienation.

As in the other Indian-White comparisons already noted, the Indian eighth graders exhibited a significantly higher degree of anxiety than their White counterparts. This state of anxiety correlated, beyond the .01 level, with the following scales: .620 with self alienation, .506 with ideas of external influence, .576 with social alienation, .450 with emotional alienation, and .727 with schizophrenia.

Of particular note and apparently unique to the Indian eighth graders is the high score they exhibited on the scale measuring notions of external influence. It would seem that they sense themselves caught by forces beyond their command and, bewildered by it all, begin to "freeze" (become immobile), and to withdraw within themselves. This feeling of external coercion correlates, beyond the .01 level, with the following scales: .703 with schizophrenia, .780 with paranoia, .763 with subjective depression, .521 with self alienation, .618 with social alienation, .462 with emotional alienation. At the same time, as though emphasizing the helpless state in which they feel themselves, the Pal scale negatively correlates -.395 with ego strength.

Again, in what may be hypothesized as a type of reaction formation, the Indian eighth graders, although scoring higher than the White eighth graders on all the other personality variables and lower on the achievement variables, scored significantly higher than the White eighth graders on the need-to-achieve scale. It would appear that the Indian eighth graders, although confused and almost immobilized by the conflicting cues of the two cultures engulfing him, can, for a possibly stabilizing contact with reality, reach out and hope for achievement. The greater the stress, the more he may aspire for and verbalize achievement.

One could comment with detail on the other variables, but the distinctive pattern characterizing the Indian eighth graders emerges quite clearly. They reveal themselves as feeling they are caught and carried along by circumstances beyond their control. They thus reveal significantly higher scores for feelings of rejection, depression, alienation from themselves and others, paranoid thinking and withdrawal. The pattern of correlations appearing in all the comparisons thus far suggests the centrality of the concept of alienation in the understanding of these data.

Comparison of Indian and White ninth grade. Of the 28 comparisons reported in Table 10, 23 obtained significance at the .01 level of confidence and one at the .05 level.

TABLE 10

COMPARISON OF INDIAN AND WHITE STUDENTS FOR THE NINTH GRADE

	INDIAN N: 159		WHITE N: 126		
Variable	Mn.	S.D.	Mn.	S.D.	t
1. L	4.14	2.50	3.00	1.99	5.46**
2. F	13.26	7.07	6.89	5.21	4.12**
3. K	10.35	4.23	11.68	4.27	2.60**
4. Hs	15.69	4.88	12.25	4.07	6.32**
5. D	23.20	5.21	18.83	4.52	7.40**
6. Hy	20.55	5.07	19.08	4.66	2.49*
7. Pd	25.13	6.42	22.88	6.58	2.89**
8. Mf(m)	11.73	11.72	11.97	11.38	N.S.
9. Mf(f)	14.42	15.18	15.43	17.09	N.S.
10. Pa	12.77	7.37	10.26	3.82	3.43**
11. Pt	25.19	8.07	18.72	8.51	6.52**
12. Sc	29.51	11.14	19.17	9.98	8.09**
13. Ma	22.89	5.06	20.64	4.65	3.83**
14. Si	35.36	6.04	30.12	8.42	6.08**
15. A	22.40	7.14	17.09	9.15	5.54**
16. R	15.14	4.38	14.54	4.11	1.16 N.S
17. Ac	14.84	3.96	13.65	3.71	6.50**

TABLE 10 (continued)

	INDIAN N: 159		WHITE N: 126		
Variable	Mn.	S.D.	Mn.	S.D.	t
18. Es	35.34	5.81	40.33	5.57	7.28**
19. Dy	30.09	7.18	24.95	8.65	5.45**
20. Dl	12.48	4.24	8.28	3.92	8.53**
21. D4	5.72	2.54	3.46	2.14	7.98**
22. Hy2	3.72	1.85	5.46	2.20	7.22**
23. Pd2	4.64	2.84	4.20	1.63	1.54 N.S.
24. Pd4a	8.19	2.87	6.40	2.94	5.04**
25. Pd4b	7.58	2.73	4.70	2.65	5.02**
26. Pal	5.25	3.06	2.98	2.60	6.60**
27. Scla	7.68	3.29	5.06	3.07	6.41**
28. Sclb	3.45	2.13	2.05	1.78	6.85**

*Designates significance at .05 level

**Designates significance at .01 level

These included the following scales: L, F, K, Hs, D, Hy, Pd, Pa, Pt, Sc, Ma, Si, A, R, Ac, Es, Dy, Dl, D4, Hy2, Pd2, Pd4a, Pd4b, Pal, Scia, and Scib. Where such significance was obtained, the Indian ninth grade students revealed greater personality disruption, hence poorer personal and social adjustment.

These pupils continued the same tendency evidenced by the other Indian groups, namely to record significantly higher F scores than their White counterparts. Following such signs of feelings of rejection, one notes again the significantly greater scores of the ninth grade Indians for feelings of high anxiety, depression, schizophrenia, paranoia and the components of alienation. For this group, the feeling of rejection correlates beyond the .01 level with the following scales: .604 with social alienation; .804 with schizophrenia; .524 with anxiety; .578 with subjective depression; .538 with self alienation; .720 with ideas of external influence; .582 with emotional alienation.

The anxiety, attendant upon such feelings of rejection, correlates .685 with self alienation, .582 with ideas of external coercion, .644 with social alienation, .460 with emotional alienation, .535 with subjective depression, .787 with dependency, .712 with schizophrenia and .316 with paranoia.

Among the extreme high scores obtained by the Indian ninth graders were those for social alienation. This variable correlated beyond the .01 level with the following scales: .556 with self alienation; .683 with ideas of external coercion; .501 with emotional alienation; .495 with subjective depression; .569 with dependency; .811 with schizophrenia.

Notable among the other high and significant response tendencies shown by the Indian ninth graders were those for subjective depression. This scale correlated, beyond the .01 level, .642 with self alienation, .443 with ideas of external coercion, .495 with social alienation, .547 with emotional alienation, .512 with dependency, and .653 with schizophrenia.

A tendency toward withdrawal is indicated by the rather elevated scores on the schizophrenia scale. It also correlates strongly and positively with the following scales: .712 with anxiety; .597 with dependency; .653 with subjective depression; .671 with self alienation; .712 with ideas of external coercion; .811 with social alienation; .664 with emotional alienation.

As did the Indian eighth graders, this group evidenced high need-to-achieve scores in combination with significantly lower ego strength scores than were manifested by their White counterparts.

In summary, the Indian ninth grade students revealed themselves as more disturbed than the White ninth graders in their feelings of rejection, anxiety, depression, withdrawal and alienation from themselves and others.

Comparison of Indian twelfth grade and all White students. Fewer real differences on the personality variables were observed in this comparison than with any of the others reported. Of the 28 comparisons reported in Table 11, only seven attain significance at the .01 level and five at the .05 level.

It must be recalled that 60% of Indian students drop out of school before the twelfth grade. It would seem to follow, then, that the minority who remain in school had achieved a generally better adjustment and this should show itself in their personality scores.

Whereas all the Indian groups previously studied reveal considerable feelings of rejection relative to their White counterparts, it is interesting and encouraging to note that between the Indian twelfth graders and all White students, there is no significant difference at all on the F scale. The general depression, attendant on feelings of rejection, is likewise missing in this group.

The previous Indian groups discussed above apparently believed that they were caught and carried along by circumstances beyond their control. The Indian twelfth graders,

TABLE 11

COMPARISON OF INDIAN TWELFTH GRADE AND ALL WHITE STUDENTS

	INDIAN N: 92		WHITE N: 223		
Variable	Mn.	S.D.	Mn.	S.D.	t
1. L	3.88	2.49	3.27	2.08	N.S.
2. F	8.56	5.20	7.89	5.63	N.S.
3. K	11.07	4.63	11.78	4.37	1.28 N.S
4. Hs	13.73	3.78	12.72	3.95	2.07*
5. D	20.15	4.41	19.12	4.62	1.83 N.S
6. Hy	19.74	4.37	19.42	4.56	N.S.
7. Pd	24.27	4.43	22.98	5.97	1.86 N.S
8. Mf(m)	11.78	11.38	11.69	11.79	N.S.
9. Mf(f)	14.80	15.91	16.27	17.12	N.S.
10. Pa	10.72	3.70	10.74	4.15	N.S.
11. Pt	21.92	7.96	18.77	8.42	3.06**
12. Sc	23.15	9.99	20.27	10.58	2.22*
13. Ma	21.85	4.66	20.62	5.14	1.97*
14. Si	30.78	7.60	29.91	8.37	N.S.
15. A	20.57	8.92	16.99	8.98	3.28**
16. R	13.20	4.09	14.65	4.19	2.81**
17. Ac	14.03	4.06	13.19	3.84	1.73 N.S.

TABLE 11 (continued)

	INDIAN N: 92		WHITE N: 223		
Variable	Mn.	S.D.	Mn.	S.D.	t
18. Es	39.04	5.57	39.36	6.68	N.S.
19. Dy	27.07	8.70	24.92	8.96	1.94 N.S.
20. Dl	9.65	3.84	8.60	3.80	2.21*
21. D4	4.55	2.17	3.61	2.15	3.51**
22. Hy2	4.84	2.54	5.42	2.22	2.00*
23. Pd2	4.45	1.75	4.12	1.66	1.49 N.S.
24. Pd4a	7.45	3.08	6.45	2.99	2.65**
25. Pd4b	6.86	2.96	4.89	2.72	5.66**
26. Pal	3.90	2.60	3.29	2.79	1.81 N.S.
27. Scla	6.05	3.24	5.34	3.28	3.00**
28. Sclb	2.36	1.92	2.17	1.86	N.S.

*Designates significance at .05 level

**Designates significance at .01 level

on the other hand, show no significant difference on this variable when compared to all White students. The former seem to have gained a degree of confidence in themselves equivalent to that of the Whites, and this may be inferred from the non-significant differences between the groups on the ego strength scale, as well as the lack of differences on the dependency scale. Continuing the same trend, no significant difference between the Indian twelfth grade and all White students was found on the need-to-achieve scale. The previous Indian tendency to score significantly higher than White groups on the paranoia scale was also missing.

Further encouraging signs of better adjustment on the part of the twelfth grade Indians is the notable absence of any significant differences between them and all White students on Hy, Pd, Si and Scib scales. Also not present were the previous Indian trends to withdrawal and social isolation. The twelfth grade Indian pupils thus show themselves to be more comfortable with the world, more self assured and self-confident.

It must be recalled from the review of the literature that the twelfth grade Indian students are still considerably behind their White counterparts in scholastic achievement. It therefore seems reasonable to look for significant differences on the personality variables between the Indian twelfth graders and all White students in order to account for the residues of maladjustment factors which could possibly explain in part their remaining behind in achievement.

Notable among the differences significant at the .01 level between the Indian twelfth graders and all White students are those on the following scales: Psychasthenia, anxiety, social and self alienation. Real variation also obtained, at the .05 level for the schizophrenic, manic-depressive and the hysteria scales.

It would seem that the Indian twelfth grader has attained an impressive degree of adjustment to the cultural stress under which he lives. Burdened by these pressures, he seems to be fighting the weight of underlying anxiety and the "temptation" to withdraw and become depressed. Thus far, his effort has been relatively successful, but the struggle to find meaningful and realistic values, as he tries to fuse the two cultures, could possibly account for his lagging achievement.

In summary, it can be seen that the Indian twelfth grade students show remarkably better adjustment than the Indian eighth and ninth graders. The Indian twelfth graders all demonstrate no significant differences between themselves and all White students in feelings of rejection, general depression, hysteria, psychopathic deviation, paranoia, social isolation, need-for-achievement, ego strength, dependency, authority conflict, notions of external coercion and emotional alienation. As possible residues of their cultural-identity conflicts they show themselves significantly poorer than the White students in anxiety, psychasthenia, social alienation, self alienation and a slightly greater tendency to withdraw.

Since the above data reveal a consistent pattern of significant differences among all the White-Indian groups compared, it would appear that hypothesis II receives strong support.

Analysis of Indian Data

Indian eighth, ninth and twelfth grades. Comparisons among the eighth, ninth and twelfth grade Indians were made on all the variables by a randomized groups analysis of variance design. Of the 29 comparisons reported in Table 12, 19 significant F ratios appeared at the .01 level and four at the .05 level. The Scheffe test was then utilized to identify specific between group differences.

Among the 23 significant F ratios, the Scheffe test (Table 13) yielded 21 significant gaps at the .05 level and two at the .10 level. On all but two of the variables, the eighth grade produced the significant gap in relation to the twelfth grade.

The ninth grade produced 19 significant gaps in relation to the twelfth grade, and the eighth grade produced

TABLE 12

COMPARISON OF INDIAN STUDENTS BY GRADES

	EIGHTH GRADE N: 164		NINTH GRADE N: 159		TWELFTH GRADE N: 92		
Variable	Mn.	S.D.	Mn.	S.D.	Mn.	S.D.	F
1. L	4.54	2.73	4.14	2.50	3.88	2.49	2.11 N.S.
2. F	14.61	6.53	13.26	7.07	8.56	5.20	6.21**
3. K	10.51	4.34	10.35	4.23	11.07	4.63	N.S.
4. Hs	17.63	4.91	15.69	4.88	13.73	3.78	21.12**
5. D	23.85	4.99	23.20	5.21	20.15	4.41	17.20**
6. Hy	21.34	5.17	20.55	5.07	19.74	4.37	14.32**
7. Pd	26.32	4.43	25.13	6.42	24.27	4.43	4.77**
8. Mf(m)	12.90	11.66	11.73	11.72	11.78	11.38	N.S.
9. Mf(f)	13.48	15.88	14.42	15.18	14.80	15.91	N.S.
10. Pa	14.09	4.77	12.77	7.73	10.72	3.70	10.01**
11. Pt	25.30	7.23	25.19	8.07	21.92	7.96	6.60**
12. Sc	31.81	10.82	29.51	11.14	23.15	9.99	19.19**
13. Ma	23.74	4.99	22.89	5.06	21.85	4.66	4.35*
14. Si	34.43	6.45	35.36	6.04	30.78	7.60	14.70**
15. A	22.20	7.38	22.40	7.14	20.57	8.92	1.84 N.S.
16. R	15.52	4.44	15.14	4.38	13.20	4.09	8.93**
17. Ac	15.09	3.75	14.84	3.96	14.03	4.06	14.01**

TABLE 12 (continued)

	EIGHTH GRADE N: 164		NINTH GRADE N: 159		TWELFTH GRADE N: 92		
Variable	Mn.	S.D.	Mn.	S.D.	Mn.	S.D.	F
18. Es	34.90	5.61	35.34	5.81	39.04	5.57	17.25**
19. Dy	30.38	8.05	30.09	7.18	27.07	8.70	5.81**
20. D1	12.77	3.71	12.48	4.24	9.65	3.84	20.43**
21. D4	6.46	4.85	5.72	2.54	4.55	2.17	8.29**
22. Hy2	4.32	4.48	3.72	1.85	4.84	2.54	3.53*
23. Pd2	5.55	3.96	4.64	2.84	4.45	1.75	4.90**
24. Pd4a	8.57	2.97	8.19	2.87	7.45	3.08	4.26*
25. Pd4b	7.64	2.80	7.58	2.73	6.86	2.96	2.55 N.S
26. Pa1	6.29	3.51	5.25	3.06	3.90	2.60	16.87**
27. Sc1a	8.55	3.40	7.68	3.29	6.05	3.24	16.18**
28. Sc1b	3.59	2.09	3.45	2.13	2.36	1.92	11.29**
29. Drops	0.81	0.39	0.87	0.33	0.91	0.28	3.75*

*Designates significance at .05 level

**Designates significance at .01 level

TABLE 13

SCHEFFE' TEST FOR DIFFERENCES AMONG INDIAN EIGHTH, NINTH AND TWELFTH GRADES

Variable	MEANS			SIGNIFICANT GAP (No entry indicates no significance at either level)	
	8th	9th	12th	.10	.05
1. L	4.54	4.14	3.88		
2. F	14.61	13.26	8.56	2.17	
3. K	10.51	10.35	11.07		
4. Hs	17.63	15.69	13.73		1.48
5. D	23.85	23.20	20.15		.20
6. Hy	21.34	20.55	19.74		.23
7. Pd	26.32	25.13	24.27		1.67
8. Mf(m)	12.90	11.73	11.78		
9. Mf(f)	13.48	14.42	14.80		
10. Pa	14.09	12.77	10.70		1.82
11. Pt	25.30	25.19	21.92		2.45

TABLE 13 (continued)

Variable	MEANS			SIGNIFICANT GAP (No entry indicates no significance at either level)	
	8th	9th	12th	.10	.05
12. Sc	31.81	29.51	23.15		.43
13. Ma	23.74	22.89	21.85		1.57
14. Si	34.43	35.36	30.78		2.10
15. A	22.20	22.40	20.57		
16. R	15.52	15.14	13.20		1.38
17. Ac	15.09	14.84	14.03		.30
18. Es	34.90	35.34	39.04		1.80
19. Dy	30.38	30.09	27.07		2.50
20. D1	12.77	12.48	9.65		1.25
21. D4	6.46	5.72	4.55		1.13
22. Hy2	4.32	3.72	4.84		1.04
23. Pd2	5.55	4.64	4.45		1.00
24. Pd4a	8.57	8.19	7.45		.93

TABLE 13 (continued)

Variable	MEANS			SIGNIFICANT GAP (No entry indicates no significance at either level)	
	8th	9th	12th	.10	.05
25. Pd4b	7.64	7.58	6.86		
26. Pal	6.29	5.25	3.90		1.00
27. Scla	8.55	7.68	6.05		1.06
28. Sclb	3.59	3.45	2.36		.65
29. Drops	0.81	0.87	0.91	.09	

only five in relation to the ninth grade.

Between the ninth and the twelfth grades, the only variables on which no real differences were manifested were Pd, Ma, Hy2, Pd2, Pd4a and the dropout variable. Between the eighth and the ninth grades, the same lack of meaningful variation occurred on only the Pa1, Hs, D, Hy and Scia scales.

Thus, it would appear that the eighth and the ninth grades are somewhat similar relative to the twelfth grade. With the twelfth grade significantly differing from the eighth grade on all 23 variables and differing from the ninth grade on 19 variables, there is a hint of slightly better adjustment for the ninth graders and further support for the hypothesis that the longer the Indian students stay in school, the better adjusted they appear to become.

Indian dropouts and Indian nondropouts. Of the 33 comparisons reported in Table 5, four were significant at the .01 level and seven at the .05 level. These included the following scales: F, D, Pa, Pt, Sc, Si, A, Ac, D1, Pd4b and Scib. Where such significance obtained, the dropouts consistently revealed greater personality disruptions and problems of adjustment.

Of immediate note is the significantly higher F scores, or feelings of rejection, that the Indian dropouts show in relation to those of their fellows who stay in school. Whereas, the average Indian student, relative to all White students revealed more severe feelings of rejection, anxiety, depression and alienation, the Indian dropouts exhibit similar variation in these same areas in relation to all Indian students. In addition to the variables just mentioned, the Indian dropouts show significantly greater differences from the continuing Indian pupil in paranoia, schizophrenia, psychasthenia and all of the components of alienation.

Feelings of rejection, on the part of the Indian dropouts correlated, at the .01 level, .785 with social isolation, .557 with anxiety, .678 with social alienation, .654 with self alienation, .784 with ideas of external coercion, and .554 with emotional alienation.

The subjective depression scores of the dropouts correlated .570 with self alienation, .587 with ideas of external coercion, .591 with social alienation and .597 with emotional alienation. All of these coefficients are statistically significant beyond the .01 level.

The schizophrenic, or tendency-to-withdraw, feelings of the dropouts correlated, beyond the .01 level, with the following scales: .647 with anxiety, .673 with need for affection, .631 with authority conflict, .817 with self alienation, .836 with ideas of external coercion, .808 with social alienation, and .719 with emotional alienation. The same positive manifold evidenced for these variables with the Indian Ss is again manifested.

As was noted, the dropouts scored significantly higher than the continuing Indians on the anxiety scale. Anxiety for the dropouts correlated, beyond the .01 level, with the following scales: .763 with self alienation, .721 with social alienation, .696 with ideas of external coercion, and .587 with emotional alienation.

Of particular interest is the significantly higher scores obtained by the dropouts over the continuing Indians on the need-to-achieve scale. This phenomenon was noted before wherein all the Indian groups showed the same trend relative to their White counterparts on this scale. The dropouts also evidence this same tendency in relation to the Indians who continued in school. One could hypothesize that individuals feeling themselves lost and immobilized by circumstances beyond their control make a fantasy reaction formation for goals which they feel they can never achieve. At this point, all that one can conclude is that the phenomenon needs further research and exploration.

In summary, the Indian dropout scores significantly different and poorer than the continuing Indians in feelings of rejection, anxiety, depression, and all the components of alienation.

Indian Dropouts and Indian twelfth grade. In an effort to obtain a personality profile of the Indian dropout, it was hypothesized that sharper contrasts could be discerned by comparing the dropouts with the successful Indian student who made it to the twelfth grade. Table 14 presents the pattern of significant differences between these groups.

Whereas the Indian dropout relative to the continuing Indians demonstrated only 11 significant differences, the Indian dropouts and twelfth grade Indians reveal 23 significant differences; 18 at the .01 level and five at the .05 level.

Of immediate interest among the larger gaps between the two groups is the great difference in scores on the schizophrenic scale. Characterizing the dropouts is this tendency to withdrawal, followed by feelings of rejection, social isolation, psychasthenia, general and subjective depression, and anxiety.

Significant differences between the Indian dropouts and Indian twelfth graders include the following scales: F, K, Hs, D, Pd, Pa, Pt, Sc, Ma, Si, A, R, Ac, Es, Dy, Dl, D4, Hy2, Pd2, Pd4a, Pd4b, Pal, Scia, Scib.

The inter-correlations among these various scales have already been noted in the previous section which compared the Indian dropouts with Indians who continued in school. On examining the core profile of the Indian dropouts,

TABLE 14

COMPARISON OF INDIAN DROPOUTS AND INDIAN TWELFTH GRADE

	DROPOUTS N: 59		INDIAN TWELFTH N: 92		
Variable	Mn.	S.D.	Mn.	S.D.	t
1. L	4.73	2.59	3.88	2.49	1.95 N.
2. F	14.47	6.13	8.56	5.20	5.28**
3. K	9.61	3.74	11.07	4.63	3.77**
4. Hs	16.76	4.49	13.73	3.78	4.43**
5. D	24.42	5.22	20.15	4.41	5.36**
6. Hy	20.71	4.94	19.74	4.37	1.25 N.
7. Pd	25.81	4.42	24.27	4.43	2.06*
8. Mf(m)	11.25	12.17	11.78	11.38	N.S.
9. Mf(f)	16.68	15.78	14.80	15.91	N.S.
10. Pa	14.63	10.77	10.72	3.70	3.17**
11. Pt	26.46	9.75	21.92	7.96	3.10**
12. Sc	31.98	11.91	23.15	3.99	4.87**
13. Ma	23.56	5.89	21.85	4.66	1.96*
14. Si	36.63	5.63	30.78	7.60	5.01**
15. A	23.75	7.13	20.57	8.92	2.29*
16. R	14.75	3.96	13.20	4.09	2.28*
17. Ac	15.83	5.01	14.03	4.06	2.40*

TABLE 14 (continued)

	DROPOUTS N: 59		INDIAN TWELFTH N: 92		
Variable	Mn.	S.D.	Mn.	S.D.	t
18. Es	34.92	5.59	39.04	5.57	4.40**
19. Dy	30.85	8.53	27.07	8.70	2.60**
20. D1	13.15	4.26	9.65	3.84	5.20**
21. D4	6.42	2.42	4.55	2.17	4.89**
22. Hy2	3.58	2.92	4.84	2.54	2.78**
23. Pd2	4.76	1.70	4.45	1.75	1.08 N.S.
24. Pd4a	8.71	2.79	7.45	3.08	5.07**
25. Pd4b	8.37	2.98	6.86	2.96	9.50**
26. Pa1	5.93	3.19	3.90	2.60	4.24**
27. Sc1a	8.34	3.62	6.05	3.24	3.89**
28. Sc1b	4.03	2.25	2.36	1.92	4.85**

*Designates significance at .05 level

**Designates significance at .01 level

the centrality of the concept of alienation as the coordinating pattern explaining these data is again suggested. This is further seen in the highly significant differences between the Indian dropouts and the twelfth grade Indians on the scales implying schizophrenia, feelings of rejection, anxiety, psychasthenia, depression, social alienation, self alienation and emotional alienation.

These data and the data from the preceding section appear to lend strong support to hypothesis IV.

Comparison of Indians by blood groups. Comparisons among the quarter-blood, half-blood, three-quarter blood and full blood Indians were made on all the variables by a randomized groups analysis of variance design. Of the 34 comparisons reported in Table 3, 11 significant F ratios appeared at the .01 level and six at the .05. The Scheffe test was then utilized to locate specifically the differences among the blood groups.

Among the 17 significant F ratios, the Scheffe test (Table 4) yielded five significant gaps at the .05 level and six at the .10 level.[3] On every one of the variables, those with the greater degree of Indian blood produced the significant gap in relation to those with less Indian blood. The full bloods produced four significant gaps in relation to the quarter-bloods and two significant gaps in relation to the half-bloods. The three-quarter bloods produced three significant gaps in relation to the quarter-bloods, and one significant gap in relation to the half-bloods.

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[3] The .10 level is reported because of the tendency of the alpha level to drop with increasing number of groups to be compared. According to Winer (1960), the actual alpha level for all a priori contrasts is as follows: when k is 4, at the .05 level, alpha is actually .0052; when k is 4 at the .01 level, alpha is actually .00076.

The variables on which significant gaps appeared included the following: Hs, D, Pt, Es, D4, Pd4a, Pd4b, Scib and the dropout variable.

There were no significant differences among the blood groups on the achievement variable from the fourth to the eighth grade. Thus, it would appear, that the more the Indian heritage one has, the more he is significantly different from those with less Indian blood in feeling rejection, depression, psychasthenia. He also reveals less ego strength and greater signs of alienation from himself and others. Being socially and emotionally alienated, he is more inclined to become a dropout.

In the light of these data, hypothesis III seems to find support.

Comparison of Indian boys and Indian girls. Of the 34 comparisons reported in Table 2, six were significant at the .01 level and three at the .05 level. These included the following scales: D, Hy, Si, A, R, Es, Dy, Dl, and Pd4b. Where such real variation obtained, the Indian girls revealed greater problems of adjustment.

It is also of interest to note that the Indian boys and Indian girls showed no significant differences on the following scales: Hs, Pd, Pa, Pt, Sc, Ma, Ac, Hy2, Pd2, Pd4a, Pal, Scia and Scib. Yet, on these same variables, when the Indian boys were compared to the White boys and the Indian girls compared to the White girls, the real differences were demonstrated. Hence, it may be concluded that the Indian boys and girls are probably responding to the same deviant personality stresses on these variables in relation to their White sex counterparts. Although "in the same boat" on these dimensions, the Indian girls possibly showed themselves to be under greater stress than the Indian boys by being significantly poorer on even more of the measures. The Indian girls, for example, were significantly different from the Indian boys in feelings of depression, hysteria, social isolation, anxiety, repression, less ego strength, dependency, subjective depression and self alienation.

It may be hypothesized that the Indian girls, feeling themselves less mobile than the boys in being able to leave and to return to the reservation feel greater anxiety and frustration at reservation confinement and reservation prospects which they perceive as quite bleak. Furthermore, the traditional female role in Sioux society was one of complete subservience and considerably lower than the masculine role. Indian females, thrust into competition with Indian males in the White environment of a modern school, could well feel disturbed by the school pressure to perform and excel over boys when the culture recommends conformity to an inferior role. Achieving Indian girls, then, would be farther removed from traditional roles and consequently more anxious and insecure. In the traditional Sioux culture, the male was all important. Although the Indian boy, in relation to the White boy, is significantly different on the variables already seen, in relation to the Indian girl he is in his own masculine culture and thus feels more secure.

Further exploration is necessary before one can draw meaningful conclusions regarding the less desirable performance of Indian girls in relation to the Indian boys.

Achievement-personality correlations for eighth grade Indians. The inter-correlations between achievement and personality variables are reported in Table 15. It will be noted that, as the psychological variable remains relatively constant and the achievement variable becomes larger for each grade, the correlations between the psychological variable

TABLE 15

INTERCORRELATIONS BETWEEN ACHIEVEMENT AND PERSONALITY VARIABLES BY GRADE LEVELS FOR ALL INDIAN EIGHTH GRADE STUDENTS

	Grade Level				
MMPI Variable	4th N: 46	5th N: 76	6th N: 87	7th N: 87	8th N: 114
1. L	-.442**	-.365**	-.372**	-.285**	-.183*
2. F	-.024	-.033	-.072	-.190	-.441**
3. K	-.319*	-.313**	-.161	-.166	-.051
4. Hs	-.117	-.115	-.133	-.204*	-.249**
5. D	-.216	-.170	-.168	-.228*	-.259**
6. Hy	-.055	-.078	-.061	-.105	-.113
7. Pd	-.224	-.147	-.051	-.137	-.263**
8. Mf(m)	-.455**	-.055	-.065	-.276**	-.289**
9. Mf(f)	.438**	.040	.075	.284**	.290**
10. Pa	-.178	-.149	-.291**	-.319**	-.430**
11. Pt	.203	.144	.028	-.017	-.105
12. Sc	.086	.093	-.033	-.103	-.238*
13. Ma	-.189	.093	.080	.024	-.170
14. Si	.107	.195	-.016	.013	.079
15. A	.300*	.236*	.077	.078	.018
16. R	-.198	-.126	-.134	-.028	-.008
17. Ac	.253	.277*	.160	.044	.076

TABLE 15 (continued)

	Grade Level				
MMPI Variable	4th N: 46	5th N: 76	6th N: 87	7th N: 87	8th N: 114
18. Es	.092	.071	.245*	.238*	.236*
19. Dy	.417**	.186	.077	.151	-.016
20. Dl	-.066	-.135	-.145	-.222*	-.263**
21. D4	.179	-.046	-.087	-.115	-.181*
22. Hy2	.151	-.005	-.020	.042	-.046
23. Pd2	.113	.135	-.027	.003	-.047
24. Pd4a	.140	.103	.002	-.078	-.221*
25. Pd4b	.082	.243*	.094	.091	-.152
26. Pal	.008	-.027	-.229*	-.238*	-.413**
27. Scla	.190	.085	-.098	-.128	-.234*
28. Sclb	-.109	-.013	-.055	-.226	-.237*
29. Dropouts	.294*	.026	.061	.022	-.027
30. 4th Grade		.472**	.361**	.542**	.633**
31. 5th Grade			.728**	.692**	.748**
32. 6th Grade				.675**	.701**
33. 7th Grade					.819**

*Designates significance at .05 level

**Designates significance at .01 level

and the achievement variables tend to shift in the negative direction. However, a relatively constant psychological variable and a rising achievement variable would not necessarily, in itself, cause the negative relationship because the two variables are independent. Although it is not clear why the correlations go mostly in the negative direction, it may lie in the problem of converting the achievement means of the normative group to the Indian group. It should also be recalled that, as the Indian students advance from grade to grade, nonintellectual variables are more meaningfully related to later achievement scores.

Of the 28 psychological variables reported in Table 15, 21 found significant correlations with achievement at one or all the grade levels. These included the following scales: L, F, K, Hs, D, Pd, Mf(m), Mf(f), Pa, Sc, A, Ac, Es, Dy, D1, D4, Pd4a, Pd4b, Pa1, Scia and Scib.

Among these significant relationships between the personality and achievement variables, one notes the decreasing negative correlation from the fourth to the eighth grade on the L scale. This may indicate that, as the Indian students grow older, the more compelled they feel to make a good impression and give socially desirable answers. Of interest also is the F scale which shows a significant correlation (-.441) only at the eighth grade level. This rather sudden and significant rise at the .01 level, from the seventh grade, would seem to support the data already seen that at the eighth grade level psychological disturbance is worse and feelings of rejection are most sharply felt.

General depression and subjective depression, which would seem logically connected with rejection, also correlate significantly with achievement only at the seventh and eighth grade level. General depression correlated -.228 at the .05 level in the seventh grade and -.259 at the .01 level in the eighth grade. Subjective depression correlated significantly -.222 at the .05 level in the seventh grade and -.263 at the .01 level in the eighth grade. Prior to the seventh grade, the subjective depression correlations rise each year, but not significantly. Hypochondriasis also becomes meaningfully related to achievement only at the seventh and eighth grade levels.

The Pa scale is significantly related to achievement, -.291 at the .01 level, as early as the sixth grade and this association rises significantly each year to the eighth grade inclusive. Schizophrenia, however, becomes significantly correlated with achievement, -.238 at the .01 level, only at the eighth grade.

Consonant with this later withdrawal tendency, and also in line with the emerging significance at the eighth grade, social isolation becomes meaningfully correlated,

-.234 at the .05 level, in the eighth grade, and emotional alienation shows the same tendency in the same grade. Closely associated to the components of alienation is the scale measuring ideas of external coercion, the coefficients of which increase significantly each year from the sixth grade to the eighth grade inclusive, -.229, -.238 and -.413 respectively.

In summary, the most noteworthy and significant correlations between personality and achievement variables occurred on the variables showing feelings of rejection, depression, paranoia, schizophrenia and emotional and social alienation.

CHAPTER VI

SUMMARY AND CONCLUSIONS

The purpose of the present study was to determine the correlates and possible causes of what is known as the cross-over phenomenon in the educational performance of Oglala Sioux Indian students. Characteristically, these children achieve satisfactorily for awhile, then reverse themselves and show a steady decline in achievement. This has been colloquially termed, "the crossover phenomenon."

Although the central focus of the study was the 164 Indian eighth grade students on the Pine Ridge Reservation in South Dakota and 76 White eighth grade students from the small communities closest to the Reservation, a total of 415 Indian students and 223 White students from the eighth, ninth and twelfth grade levels were studied. The achievement and personality measures were examined for the Indian and White group and among three different Indian grade groupings. Personality comparisons were also made among six different White and Indian subgroups and among five Indian subgroups in order to effect as broad an appreciation of potential group differences as possible.

Investigation of school achievement records of the 164 Indian eighth graders revealed excellent performance on the California Achievement tests from the fourth grade to the sixth grade, during which time the performance of these children excelled national norms. At the seventh grade level the Indian students suddenly "crossed-over" and fell two months behind the norm, and at the eighth grade level were lagging five months. It was hypothesized that psycho-cultural conflict during the period of adolescence causes personality problems which block educational achievement and that a comparison of the Indian students with White students would reveal significant differences which reflect such personal turmoil. All subjects were thus given the Minnesota Multiphasic Personality Inventory and comparisons were made among the above-mentioned groups.

In analyzing achievement it was found that the Indian group fell sharply behind the White group at the eighth grade level. No significant differences in achievement were found between the Indian boys and Indian girls. When the Indian group was divided by degrees of Indian "blood" into one-quarter blood, one-half blood, three-quarter blood and full bloods, no significant differences in achievement were found among the blood groups, possibly because of the small numbers in the samples. Similarly, no significant variation was observed between Indian dropouts and those who remained in school. Since the dropout sample was quite small, it was difficult to draw any meaningful conclusions between these two groups.

In comparing the personality variables among the White-Indian groups, the total Indian group, when related to the total White group, revealed 26 significant differences out of a total of 28 personality variables.

On each of these measures, the total Indian group revealed greater personality disruption and poorer adjustment. Notable among the more meaningful variables were: feelings of rejection, depression, anxiety and tendencies to withdraw, plus social, self, and emotional alienation.

The comparison of all Indian boys and all White boys on the 28 personality variables revealed 20 differences significant at the .01 level and two at the .05 level. The Indian boys revealed themselves as feeling significantly more rejected, depressed, dependent, alienated from themselves and others, and were also more anxious, withdrawn and paranoid.

The comparison of all Indian girls and all White girls on the 28 personality variables revealed 23 significant differences at the .01 level and two at the .05 level. All differences were in favor of the White girls. The Indian girls thus showed themselves to be more depressed, alienated from themselves and others, withdrawn and with less need for affection, and rejected, paranoid and anxious.

In comparing the Indian eighth grade with the White eighth grade on the 28 personality variables, the Indian pupils showed themselves to be significantly poorer on 20 of the variables at the .01 level and on four at the .05 level. The Indian eighth graders further revealed themselves as feeling caught and carried along by circumstances beyond their control, hence they were more rejected, depressed, paranoid, withdrawn and alienated from themselves and others.

Of the 29 comparisons made between Indian and White ninth graders, 23 obtained significance at the .01 level and one at the .05 level, all in favor of the White ninth graders. The Indian ninth graders thus showed themselves to be significantly different from their White counterparts in their feelings of anxiety, rejection, depression, withdrawal and alienation from themselves and others.

Comparisons between the Indian twelfth graders and all White students revealed fewer significant differences than in any of the other White-Indian matchings. Recalling that 60% of Indian students drop out before they finish high school, it could be assumed that the Indian students who stayed in school should show better adjustment. Of the 28 comparisons made between the Indian twelfth grade and all White students, only seven obtained significance at the .01 level and five at the .05 level. The Indian twelfth graders showed no significant differences between themselves and all White students in feelings of rejection, general depression, hysteria, psychopathic deviation, paranoia, social isolation, need for achievement, ego strength, dependency, notions of external coercion and emotional alienation. As possible residues of cultural conflict, they were significantly different from all White students in anxiety, psychasthenia and tendency to withdraw socially.

As was stated, comparisons on the psychological variables were made among five different Indian groups. Comparisons among the eighth, ninth and twelfth grade Indians were made by a randomized group analysis of variance design. The Scheffe test was then used to locate differences where significant F ratios appeared. The Scheffe test yielded 21 significant gaps at the .05 level and two at the .10 level. On all but two of the variables, the eighth grade produced the significant gap in relation to the twelfth grade. The ninth grade produced 19 significant gaps in relation to the twelfth grade, and the eighth grade produced only five in relation to the ninth grade. The eighth grade Indian students in comparison to the twelfth grade showed themselves significantly different in feelings of powerlessness and external influence, rejection, depression and alienation.

Of the 33 comparisons made between Indian dropouts and Indians who remained in school, four were significant at the .01 level and seven at the .05 level, all in favor of the continuing Indian students. The dropouts apparently feel more rejected, anxious, depressed, psychasthenic, paranoid, self, socially, and emotionally alienated.

Of the 28 comparisons between Indian dropouts and twelfth graders, 18 were significantly different at the .01 level and five at the .05 level. The dropouts responded as withdrawn, rejected, depressed, socially isolated and showing all the components of alienation. The centrality of the concept of alienation revealed itself in all the groups studied and was most strongly delineated among the Indian dropouts.

Comparisons on the 28 personality variables were made among degree-of-blood groups by means of the analysis of variance and the Scheffe test. The latter yielded five significant gaps at the .05 level and six at the .10 level. On each of the significant differences, those with the greater degree of Indian blood produced the significant gaps in relation to those of less Indian blood. The more Indian ancestry one had, the more he appeared to feel rejected, depressed, psychasthenic, as having less ego strength, and greater self, social and emotional alienation. He was also more inclined to become a dropout.

In comparing Indian boys and Indian girls, six significant differences appeared at the .01 level and three at the .05 level, all in favor of the Indian boys. The

Indian girls evidenced more depression, hysteria, social isolation, anxiety, repression, with less ego strength, more dependent and self alienated.

The final study was between the achievement and personality correlations for the eighth grade Indian students. Of the 28 psychological variables, 21 correlated significantly with achievement at one or all the grade levels. Notable among these relationships were those with feelings of rejection, depression, paranoia, schizophrenia and emotional and social alienation.

In each of the groups studied, scales measuring tendencies to withdraw, rejection, social alienation, self alienation and emotional alienation were consistently higher than the other scales. The centrality of the concept of alienation is suggested as the integrating pattern explaining the behavior of the Indian students studied.

The future of any society depends upon the manner in which it deals intelligently with its minority groups. Since there are a number of rapidly growing minority groups in our culture, replications of studies similar to these can be highly recommended for a fuller understanding and more intelligent handling of these groups.

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APPENDIXES

APPENDIX 1

1. The Lie Score (L)

The L score is also a validating score that affords a measure of the degree to which the subject may be attempting to falsify his scores by always choosing the response that places him in the most acceptable light socially. A high L score does not entirely invalidate the other scores but indicates that the true values are probably higher than those actually obtained. In some cases the L score may be of interest in its own right as a measure of a special personality trend.

2. The Validity Score (F)

The F score is not a personality scale but serves as a check on the validity of the whole record. If the F score is high, the other scales are likely to be invalid either because the subject was careless or unable to comprehend the items, or because extensive scoring or recording errors were made. A low F score is a reliable indication that the Subject's responses were rational and relatively pertinent.

3. The K Score (K)

The K score is used essentially as a correction factor to sharpen the discriminatory power of the clinical variables measured by the Inventory. As such, K acts as a suppressor variable.

If it is to be given any concrete nonstatistical meaning, the K score is to be thought of as a measure of test-taking attitude, and is related to the L and F attitudes but is somewhat more subtle and probably taps a slightly different set of distorting factors. A high K score represents defensiveness against psychological weakness, and may indicate a defensiveness that verges upon deliberate distortion in the direction of making a more "normal" appearance. A low K score tends to indicate that a person is, if anything, overly candid and open to self-criticism and the admission of symptoms even though they may be minimal in strength. A low K score can also result from a deliberate attempt to obtain bad scores or to make a bad impression ("plus-getting").

4. The Hypochondriasis Scale (Hs)

The Hs scale is a measure of amount of abnormal concern about bodily functions. It is an improved revision of the original hypochondriasis scale H-Ch. Persons with high Hs scores are unduly worried over their health. They frequently complain of pains and disorders which are difficult to identify and for which no clear organic basis can be found. It is characteristic of the hypochondriac that he is immature in his approach to adult problems, tending to fail to respond with adequate insight.

Hypochondriacal complaints differ from hysterical complaints of bodily malfunction in that the hypochondriac is often more vague in describing his complaints and in that he does not show such clear evidence of having got out of an unacceptable situation by virtue of his symptoms as does the hysteric. The hypochondriac more frequently has a long history of exaggeration of physical complaints and of seeking sympathy.

With psychological treatment a high score may often be improved, but the basic personality is unlikely to change radically. Common organic sickness does not raise a person's score appreciably, for the scale detects a difference between the organically sick person and the hypochondriac.

5. The Depression Scale (D)

The D scale measures the depth of the clinically recognized symptom or symptom complex, depression. The depression may be the chief disability of the subject or it may accompany, or be a result of, other personality problems. A high D score indicates poor morale of the emotional type with a feeling of uselessness and inability to assume a normal optimism with regard to the future. A high score further suggests a characteristic personality background in that the person who reacts to stress with depression is characterized by lack of self-confidence, tendency to worry, narrowness of interests, and introversion. This scale, together with the Hs and Hy scales, will identify the greater proportion of those persons not under medical care who are commonly called neurotic, as well as individuals so abnormal as to need psychiatric attention.

6. The Hysteria Scale (Hy)

The Hy scale measures the degree to which the subject is like patients who have developed conversation-type hysteria symptoms. Such symptoms may be general systemic complaints or more specific complaints such as paralyses, contractures (writer's cramp), gastric or intestinal complaints, or cardiac symptoms. Subjects with high Hy scores are also especially liable to episodic attacks of weakness, fainting or even epileptiform convulsions. Definite symptoms may never appear in a person with a high score, but under stress he is likely to become overtly hysterical and solve the problems confronting him by the development of symptoms. It has been found that this scale fails to identify a small number of very uncomplicated conversion hysterias which may be quite obvious clinically and with a single or very few conversion symptoms.

The hysterical cases are more immature psychologically than any other group. Although their symptoms can often be "miraculously" alleviated by some conversion of faith or by appropriate therapy, there is always the likelihood that the problem will reappear if the stress continues or recurs.

7. The Psychopathic Deviate Scale (Pd)

The Pd scale measures the similarity of the subject to a group of persons whose main difficulty lies in their absence of deep emotional response, their inability to profit from experience, and their disregard of social mores. Although sometimes dangerous to themselves or others, these persons are commonly likable and intelligent. Except by the use of an objective instrument of this sort, their trend toward the abnormal is frequently not detected until they are in serious trouble. They may often go on behaving like perfectly normal people for several years between one outbreak and another. Their most frequent digressions from the social mores are lying, stealing, alcohol or drug addiction, and sexual immorality. They may have short periods of true psychopathic excitement or depression following the discovery of a series of their asocial or antisocial deeds. They differ from some criminal types in their inability to profit from experience and in that they seem to commit asocial acts with little thought of possible gain to themselves or of avoiding discovery.

8. The Interest Scale MF (M)

9. The Interest Scale MF (F)

This scale measures the tendency toward masculinity or femininity of interest pattern; separate T scores are provided for the two sexes. In either case a high score indicates a deviation of the basic interest pattern in the direction of the opposite sex. The items were originally selected by a comparison of masculine with feminine males and of the two sexes.

Every item finally chosen for this scale indicated a trend in the direction of femininity on the part of male sexual inverts. Males with very high Mf scores have frequently been found to be either overt or repressed sexual inverts. However, homosexual abnormality must not be assumed on the basis of a high score without confirmatory evidence. Among females high scores cannot yet be safely assumed to have similar clinical significance, and the interpretation must be limited to measurement of the general trait.

10. The Paranoia Scale (Pa)

The Pa scale was derived by contrasting normal persons with a group of clinic patients who were characterized by suspiciousness, oversensitivity and delusions of persecution, with or without expansive egotism. The diagnoses were usually paranoia, paranoid state or paranoid schizophrenia. Here again, however, we have observed a few very paranoid persons who have successfully avoided betraying themselves in the items of this scale.

Persons with an excess amount of paranoid suspiciousness are common and in many situations are not especially handicapped.

11. The Psychasthenia Scale (Pt)

The Pt scale measures the similarity of the subject to psychiatric patients who are troubled by phobias or compulsive behavior. The compulsive behavior may be either explicit, as expressed by excessive hand washing, vacillation, or other ineffectual activity, or implicit, as in the inability to escape useless thinking or obsessive ideas. The phobias include all types of unreasonable fear of things or situations as well as overreaction to more reasonable stimuli.

Many persons show phobias or compulsive behavior without being greatly incapacitated. Such minor phobias as fear of snakes or spiders and such compulsions as being forced to count objects seen in arrays or always to return and check a locked door are rarely disabling. Frequently a psychasthenic tendency may be manifested merely in a mild depression, excessive worry, lack of confidence, or inability to concentrate.

12. The Schizophrenia Scale (Sc)

The Sc scale measures the similarity of the subject's responses to those patients who are characterized by bizarre and unusual thoughts or behavior. There is a splitting of the subjective life of the schizophrenic person from reality so that the observer cannot follow rationally the shifts in mood or behavior.

The Sc scale distinguishes about 60 per cent of observed cases diagnosed as schizophrenia. It does not identify some paranoid types of schizophrenia, which, however, usually score high on Pa, and certain other cases which are characterized by relatively pure schizoid behavior. It is probable that one or two additional scales will be necessary to identify the latter cases, but this is not surprising in the light of the frequently expressed psychiatric opinion that schizophrenia is not a clinical entity but a group of rather heterogeneous conditions.

Most profiles with a high Sc score will show several other high points, and further clinical sorting will need to be carried out by subjective study of the case. Exceptional to other scale intercorrelations, the correlation of Sc with Pt for normal cases is .84. Both experience and the fact that this correlation drops to .75 on abnormal cases lead us to feel that, at least for the present, there is value in using both scales.

13. The Hypomania Scale (Ma)

The Ma scale measures the personality factor characteristic of persons with marked overproductivity in thought and action. The word hypomania refers to a lesser state of mania. Although the real manic patient is the lay person's prototype for the "insane," the hypomanic person seems just slightly off normal. Some of the scale items are mere accentuations of normal responses. A principal difficulty in the development of the scale was the differentiation of clinically hypomanic patients from normal persons who are merely ambitious, vigorous and full of plans.

The hypomanic patient has usually got into trouble because of undertaking too many things. He is active and enthusiastic. Contrary to common expectations he may also be somewhat depressed at times. His activities may interfere with other people through his attempts to reform social practice, his enthusiastic stirring up of projects in which he then may lose interest, or his disregard of social conventions. In the latter connection he may get into trouble with the law. A fair percentage of patients diagnosed psychopathic personality are better called hypomanic.

14. The Social I. E. Scale (Si)

The Si scale aims to measure the tendency to withdraw from social contact with others.

The Si scale is not a clinical scale in the strict sense of being chiefly for use with hospitalized patients; it is, however, valuable for use with normals, and has been widely used in counseling and guidance work.

15. The Anxiety Scale (A)

This scale measures tendencies to feel anxiety in one's relationship to others and his environment. Persons scoring high on the Anxiety scale usually possess a general feeling of insecurity and lack of confidence in their own abilities.

16. The Repression Scale (R)

This scale measures the degree to which one feels repressed and held back by circumstances.

17. The Achievement Scale (Ac)

This scale measures one's need to achieve.

18. The Ego Strength Scale (Es)

This is a scale to measure adaptability and personal resourcefulness, i.e., personality integration.

19. The Dependency Scale (Dy)

The Dependency Scale measures excessive immaturity and the tendency to rely upon others excessively.

20. The Subjective Depression Scale (D1)

The Subjective Depression Scale measures the negation of joy in doing things. It also measures pessimism, poor morale and a low esteem of self. High scores on this scale indicate a psychological inertia and lack of energy for coping with problems.

21. The Mental Dullness Scale (D4)

The Mental Dullness Scale measures unresponsiveness and a distrust of one's own psychological functioning.

22. The Need for Affection and Reinforcement from Others Scale (Hy2)

This need is implied in an obtuse denial of a critical or resentful attitude toward other people. It also implies impunitiveness and an overly protested faith and optimism in other people.

23. The Authority Conflict Scale (Pd2)

This scale measures resentment of societal demands, conventions, and parental standards.

24. The Social Alienation Scale (Pd4a)

This scale measures one's feelings of isolation from other people, lack of belingingness, externalization of blame for difficulties and lack of gratification in social relations.

25. The Self-Alienation Scale (Pd4b)

This scale measures lack of self-integration, avowal of guilt and dependency.

26. The Ideas of External Influence Scale (Pa1)

The scale measures the externalization of blame for one's problems, frustrations and failures. It also measures projection of responsibility for negative feelings. In its extreme form, it indicates persecutory ideas.

27. The Social Alienation Scale (Scla)

The other social alienation scale is related to the psychopathic deviate scale. This scale is drawn from the schizophrenia scale and indicates a lack of rapport with other people and a withdrawal from meaningful relationships with others.

28. The Emotional Alienation Scale (Sclb)

This scale measures a feeling of lack of rapport with one's self and experiencing the self as strange. It indicates a flattening or distortion of affect and a general apathy.

These descriptions of these scales were taken from Hathaway and McKinley (1951) and Dana (1956).

APPENDIX 2

MEANS AND STANDARD DEVIATIONS FOR ALL VARIABLES OVER ALL SUBJECTS

Variable	Sample Size	Mean	S.D.
1. Lie Scale	638	3.90	2.48
2. Validity (F)	"	11.05	6.88
3. Suppresor (K)	"	10.90	4.41
4. Hypochondriasis	"	14.87	4.86
5. Depression	"	21.50	5.28
6. Hysteria	"	20.24	4.89
7. Psychopathic Deviate	"	24.56	5.69
8. Masculinity-Feminity (M) (For Males)	"	12.04	11.69
9. " " (F) (For Females)	"	14.84	16.19
10. Paranoia	"	12.10	5.43
11. Psychasthenia	"	22.49	8.50
12. Schizophrenia	"	25.95	11.80
13. Hypomania	"	22.16	5.18
14. Si (Social Isolation)	"	32.54	7.64
15. A (related to anxiety)	"	20.17	8.50
16. R (Related to repression)	"	14.79	4.35
17. Achievement	"	14.21	3.97
18. Ego Strength	"	37.18	6.37
19. Depression (Dy)	"	27.90	8.63
20. Subjective Depression	"	10.79	4.34

MEANS AND STANDARD DEVIATIONS FOR ALL VARIABLES OVER ALL SUBJECTS (Continued)

Variable	Sample Size	Mean	S.D.
21. Mental Dullness (D4)	638	5.00	3.37
22. Need for Affection (Hy2)	"	4.62	3.01
23. Authority Conflict (Pd2)	"	4.67	2.79
24. Social Alienation (Pd4a)	"	7.57	3.10
25. Self-Alienation (Pd4b)	"	6.54	3.05
26. Ideas of External Influence (Pal)	"	4.64	3.27
27. Social Alienation (Scla)	"	6.85	3.60
28. Emotional Alienation (Sclb)	"	2.88	3.11
29. Indian Dropouts	59		
30. California Achievement Test			
4th Grade (for 8th Grade Indians)	46	5.0	.7
31. 5th Grade " " " "	76	5.8	.8
32. 6th Grade " " " "	87	6.6	.9
33. 7th Grade " " " "	87	7.2	1.0
34. 8th Grade " " " "	114	7.5	1.1

APPENDIX 3

CORRELATION MATRIX FOR ALL MMPI VARIABLES OVER ALL SUBJECTS

N: 638

	1 Sex	2 Grp	3 B.Q.	4 Gr.	5 Age	6 L	7 F	8 K	9 Hs	10 D
1		.031	.012	-.000	-.093*	.015	-.058	-.052	.069	.122**
2			-.841**	-.226**	-.340**	-.186**	-.337**	.129**	-.323**	-.331**
3				.235**	.329**	.295**	.370**	-.125**	.335**	.335**
4					.268**	.106**	-.001	.043	.041	.032
5						.079*	-.026	.043	.007	.009
6							.015	.410**	.285**	.207**
7								-.339**	.501*	.466**
8									.217**	-.018
9										.578**
10										

*Designates significance at .05 level.

**Designates significance at .01 level.

CORRELATION MATRIX FOR ALL MMPI VARIABLES OVER ALL SUBJECTS

N: 638

	11 Hy	12 Pd	13 MFM	14 MFF	15 Pa	16 Pt	17 Sc	18 Ma	19 Si	20 A
1	.173**	.050	-.952**	.971**	-.037	.135**	.013	-.063	.134**	.098*
2	-.123**	-.203**	-.018	.060	-.185**	-.323**	-.350**	-.219**	-.256**	-.279**
3	.101*	.165**	-.009	-.019	.197**	.310**	.343**	.190**	.261**	.261**
4	.012	.026	-.006	-.014	-.010	-.018	-.019	-.077	.001	-.010
5	.017	.030	.094*	-.113**	-.000	.025	-.014	-.004	-.066	.061
6	.123**	.072	-.022	.009	-.035	-.190**	-.153**	-.151**	-.005	-.271**
7	.295**	.392**	.099*	-.085	.631**	.646**	.826**	.517**	.405**	.554**
8	.249**	.105**	.038	-.040	-.234**	-.586**	-.536**	-.322**	-.351**	-.715**
9	.693**	.372**	-.025	.062	.341**	.327**	.439**	.260**	.236**	.156**
10	.510**	.408**	-.081*	.105**	.333**	.467**	.474**	.125**	.455**	.335**

CORRELATION MATRIX FOR ALL MMPI VARIABLES OVER ALL SUBJECTS

N: 638

	21 R	22 Ac	23 Es	24 Dy	25 Di	26 D4	27 Hy2	28 Pd2	29 Pd4a	30 Pd4b
1	.122**	-.017	-.184**	.186**	.125**	.066	.017	-.096*	.114**	.074
2	-.021	-.189**	.255**	-.258**	-.372**	-.305**	.187**	-.141**	-.266**	-.401**
3	.035	.188**	-.295**	.239**	.364**	.315**	-.223**	.096*	.281**	.389**
4	.057	-.022	.060	-.048	-.004	.009	-.004	.053	-.006	.039
5	-.087*	-.004	.055	-.009	.016	.059	.001	-.040	.027	.111**
6	.353**	-.300**	-.013	-.246**	-.003	-.041	.058	-.075	-.183**	-.170**
7	-.043	.374**	-.499**	.536**	.648**	.463**	-.277**	.238**	.625**	.615**
8	.478**	-.646**	.407**	-.650**	-.315**	-.261**	.443**	-.084*	-.534**	-.519**
9	.323**	-.032	-.350**	.199**	.510**	.351**	-.013	.098*	.248**	.288**
10	.323**	.030	-.367**	.356**	.798**	.492**	-.127**	.072	.342**	.445**

CORRELATION MATRIX FOR ALL MMPI VARIABLES OVER ALL SUBJECTS

N: 638

	31 Pal	32 Scia	33 Scib	34 Drops	35 4th (46)[1]	36 5th (76)	37 6th (87)	38 7th (87)	39 8th (118)
1	.006	.023	-.014	-.037	.450**	.068	.083	.297**	.284**
2	-.302**	-.309**	-.247**	.234**	.000	.000	.000	.000	.000
3	.294**	.305**	.270**	-.299*	.155	-.048	-.166	-.149	-.130
4	-.009	-.001	-.038	-.166*	.524**	-.056	-.074	.110	.106
5	-.037	-.032	.024	-.080*	-.173	-.274*	-.332**	-.432**	-.286**
6	-.101**	-.141**	-.008	-.106	-.442**	-.365**	-.372**	-.284**	-.182
7	.747**	.714**	.662**	-.158**	-.024	-.032	-.071	-.190	-.441**
8	-.466**	-.527**	-.294**	.100*	-.318*	-.312**	-.161	-.166	-.050
9	.313**	.303**	.385**	-.124**	-.116	-.114	-.132	-.203*	-.248*
10	.335**	.391**	.429**	-.177**	-.216	-.170	-.167	-.228*	-.258**

[1] Designates N

CORRELATION MATRIX FOR ALL MMPI VARIABLES OVER ALL SUBJECTS

N: 638

	11 Hy	12 Pd	13 MFM	14 MFF	15 Pa	16 Pt	17 Sc	18 Ma	19 Si	20 A
11		.424**	-.114**	.188**	.294**	.240**	.295**	.163**	.108**	.084*
12			-.009	.043	.351**	.295**	.370**	.271**	.201**	.195**
13				-.936**	.082*	-.084*	.038	.099*	-.098*	-.048
14					-.038	.112**	-.013	-.072	.118**	.084*
15						.493**	.637**	.420**	.227**	.426**
16							.824**	.524**	.526**	.829**
17								.615**	.491**	.777**
18									.129**	.497**
19										.532**
20										

CORRELATION MATRIX FOR ALL MMPI VARIABLES OVER ALL SUBJECTS

N: 638

	21 R	22 Ac	23 Es	24 Dy	25 Di	26 D4	27 Hy2	28 Pd2	29 Pd4a	30 Pd4b
11	.341**	-.131**	-.227**	.134**	.424**	.242**	.240**	.098*	.202**	.209**
12	.178**	.070	-.192**	.195**	.427**	.216**	-.069	.241**	.354**	.400**
13	-.122**	.057	.163**	-.119**	-.075	-.049	-.020	-.098*	-.050	-.039
14	.125**	-.025	-.172**	.186**	.099*	.037	.035	-.101*	.093*	.040
15	-.075	.265**	-.344**	.431**	.464**	.306**	-.134**	.172**	.547**	.477**
16	-.213**	.555**	-.563**	.800**	.706**	.491**	-.381**	.110**	.712**	.726**
17	-.176**	.526**	-.576**	.723**	.725**	.531**	-.374**	.200**	.730**	.726**
18	-.285**	.482**	-.279**	.444**	.350**	.263**	-.227**	.159**	.514**	.486**
19	.204**	.249**	-.333**	.558**	.572**	.343**	-.278**	.076	.423**	.439**
20	-.341**	.647**	-.513**	.844**	.603**	.423**	-.424**	.096*	.724**	.704**

CORRELATION MATRIX FOR ALL MMPI VARIABLES OVER ALL SUBJECTS

N: 638

	31 Pal	32 Scia	33 Scib	34 Drops	35 4th (46)	36 5th (76)	37 6th (87)	38 7th (87)	39 8th (114)
11	.179**	.189**	.234**	-.031	-.054	-.078	-.061	-.105	-.112
12	.355**	.362**	.296**	-.070	-.224	-.147	-.051	-.137	-.262**
13	.035	.027	.040	.021	-.454**	-.055	-.064	-.276	-.280**
14	-.015	-.004	-.047	-.036	.437**	.040	.074	.284**	.290**
15	.699**	.555**	.496**	-.148**	-.177	-.149	-.291**	-.319**	-.430**
16	.628**	.703**	.564**	-.148**	.203	.143	.027	-.017	-.105
17	.769**	.859**	.711**	-.163**	.086	.093	-.033	-.103	-.238*
18	.539**	.537**	.364**	-.086*	-.189	.093	.079	.023	-.170
19	.326**	.505**	.331**	-.170**	.107	.195	-.015	.013	.079
20	.602**	.692**	.502**	-.134**	.300*	.236*	.076	.078	.018

CORRELATION MATRIX FOR ALL MMPI VARIABLES OVER ALL SUBJECTS

N: 638

	21 R	22 Ac	23 Es	24 Dy	25 Di	26 D4	27 Hy2	28 Pd2	29 Pd4a	30 Pd4b
21		-.445**	.127**	-.289**	.116**	.054**	.228**	.038	-.252**	-.190**
22			-.252**	.580**	.283**	.196**	-.438**	.144**	.532**	.516**
23				-.513**	-.510**	-.371**	.272**	.030	-.433**	-.485**
24					.605**	.401**	-.385**	.059	.692**	.639**
25						.609**	-.309**	.112**	.588**	.663**
26							-.025	.072	.352**	.452**
27								.049	-.379**	-.399**
28									.184**	.144**
29										.736**
30										

CORRELATION MATRIX FOR ALL MMPI VARIABLES OVER ALL SUBJECTS

N: 638

	31 Pal	32 Scia	33 Scib	34 Drops	35 4th (46)	36 5th (76)	37 6th (87)	38 7th (87)	39 8th (114)
21	-.216**	-.189**	-.060	.003	-.198	-.125	-.133	-.027	-.007
22	.455**	.494**	.317**	-.130**	.253	.276*	.159	.043	.076
23	-.470**	-.481**	-.355**	.113**	.092	.071	.244*	.237*	.235*
24	.593**	.671**	.441**	-.109**	.417**	.185	.077	.150	-.015
25	.528**	.637**	.566**	-.174**	-.066	-.135	-.144	-.221	-.263**
26	.366**	.442**	.423**	-.134**	.178	-.048	-.085	-.115	-.181
27	-.302**	-.377**	-.288**	.110**	.151	-.005	-.019	.042	-.046
28	.214**	.184**	.141**	-.010	.113	.134	-.026	.002	-.046
29	.746**	.702**	.505**	-.117**	.140	.103	.002	-.077	-.221*
30	.635**	.668**	.569**	-.191**	.082	.243	.094	.090	-.152

CORRELATION MATRIX FOR ALL MMPI VARIABLES OVER ALL SUBJECTS

N: 638

	31 Pal	32 Scia	33 Scib	34 Drops	35 4th (46)	36 5th (76)	37 6th (87)	38 7th (87)	39 8th (114)
31		.731**	.572**	-.126**	.008	-.027	-.229*	-.238*	-.413**
32			.584**	-.132**	.189	.085	-.098	-.128	-.233*
33				.560**	.180	.080	-.096	-.120	-.230*
34					-.108	-.012	-.054	-.226*	-.237*
35						.472**	.360**	.541**	.632**
36							.727**	.692**	.747**
37								.674*	.700*
38									.819**
39									

APPENDIX 4

DATA ON GROUP COMPOSITION

SEX

	Indian	White	Total
Boys	226	114	
Girls	189	109	
Total	415	223	638

DATA ON GROUP COMPOSITION

GRADE GROUPS

	Indian	White	Total
Eighth Grade	164	76	240
Ninth Grade	159	126	285
Twelfth Grade	92	21	113
Total	415	223	638

DATA ON GROUP COMPOSITION

BLOOD QUANTUM

	Boys	Girls	Total
One-quarter	35	19	54
One-half	61	43	104
Three-quarter	27	24	51
Full blood	104	102	206
Total	227	188	415